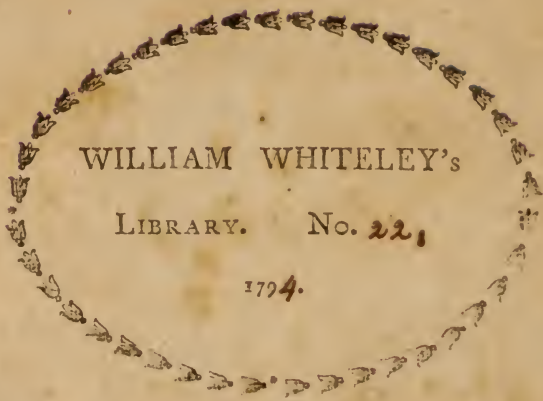


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THE
ART
OF
PREVENTING DISEASES,
AND RESTORING
HEALTH,

FOUNDED ON RATIONAL PRINCIPLES,

AND ADAPTED TO

PERSONS OF EVERY CAPACITY.



BY GEORGE WALLIS, M. D. S. M. S.

EDITOR OF THE LAST EDITION OF MOTHERBY'S MEDICAL
DICTIONARY, AND SYDENHAM'S WORKS, WITH
NOTES, &c. &c,



From Fact and Reason we our Practice draw,
The firmest Basis, and the soundest Law,
Whence Nature's powers in fullest Vigour rise,
And dread Disease with all his Phalanx flies.



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Cordell
Hist.
Coll.

EXPLANATORY PREFACE.

IN the perusal of several works on the prevention and cure of disease, I have seldom met with any that, according to my conceptions, have been formed with sufficient perspicuity; for though simplicity of stile may be essentially necessary, considering the class of people to whom such labours are addressed; still I see no cause, why the very principles and reasoning by which they ought to be directed in their pursuit should either be totally omitted, or treated in so slight a manner, as not to afford any material advantages—the principles I mean are, the NATURE OF CONSTITUTIONS, and THE IMMEDIATE CAUSES OF DISEASE; for whether we wish to prevent or cure, these two points must ever be kept in view. To prove this, let us inquire, by what are we directed in our attempts to avoid disease?

From the knowledge of the remote causes, being well acquainted with the effect which they are calculated to produce in the machine, and preventing their accession; but in all cases this cannot be done; in many, prevention of that circumstance is impossible—how then must we act? By so regulating the powers of the constitution, that it may be placed in such a state as to be rendered incapable of feeling the effect of the remote cause.

And how can this be accomplished without being thoroughly acquainted with the nature of the constitution itself; Indeed, it seems not only necessary in this respect, but also to render the disease, when the cause has produced its consequences, as mild as possible. Various proofs of the validity of this doctrine will arise upon slight consideration. In inoculating for the small-pox, we find very often great variability in the disease; and this cannot, it is clear, be owing to the matter by which the complaint is occasioned, having any variability of action; for the same matter taken from the very same pock will produce in different habits, a disease of very different natures, with respect to mildness or malignancy—it is therefore obvious the variation must arise from some deviations in the separate habits, which require different

different modes of preparation ;—and, probably, it is owing to want of accuracy in this point that some children after being inoculated die, and several fall into other maladies.

With respect to the other principle to which we must advert with regard to the cure ; we should confine ourselves to the IMMEDIATE CAUSE or CAUSES, which, acting in the habit, produce those symptoms, an enumeration of which is called disease ; for all other causes in this point of view are of no avail. Matters it by what means the disease has been occasioned, since the action of that cause is past ? the effect at this time acting as a cause, claims only attention, for that conquered, the disease vanishes. To explain, let us take the Dropsy,—its causes have been said to be, “ an hereditary disposition—drinking strong liquors, want of exercise, excessive evacuations—sudden stoppage of those which are customary and necessary—large quantities of cold, weak, watery liquors drank when the body has been over-heated by violent exercise—a low damp marshy situation—long use of poor watery diet, or viscous aliment that is hard of digestion. It is often the effect of other diseases, as jaundice, scirrhus of the liver, violent ague of long continuance, looseness, dysentery, an empyema, or consumption of the lungs—in short, whatever obstructs perspiration, or prevents the blood from being duly prepared, may occasion a dropfy.” These *may* produce this malady, I do not deny, but that not one of them is the immediate cause against which our remedies are solely to be levelled to perform a cure, nor any number of them, except such of which dropfy is only a symptom. It is to the effect brought on by these causes that we are to attend, which I take to be *general relaxation of the solids---a thin watery blood--and a weakened action of the absorbents*, (23.*) by which more water is thrown into the cellular system and different cavities by the exhalent, than can be taken up by the absorbent vessels.

From the enumeration of the former, not any thing can be collected respecting the cure--but from the immediate causes every thing, as they plainly point out the indications, viz. to invigorate the solids, and increase the action of the absorbent system, that the water may be taken from the places wherein it is deposited, and thrown out of the machine.

It was the defect in these particulars that furnished one principal reason for presenting this work to the public, in order to supply other information absolutely necessary, and more essentially beneficial. I have therefore been obliged to divide the

* Where the figures are put without the No. these refer to the Page--where with the No. or succeeding it, to the descriptions in the subsequent forms--and this throughout the work

work into distinct heads—the first of which comprehends the ANATOMY of those parts in which reside the active powers of the constitution chiefly, with intent to make my reader acquainted with the nature of them, their uses, connections, and dependencies; that he might have some idea of the materials upon which he was to act; as well as be taught what he might expect from them; for to attempt to teach a man the mode of proceeding in any art, without informing him of the nature of the subject to which he is to direct his attention, would be like throwing a rough diamond to a glass-grinder, he might destroy, but never polish. Suppose a man seized with a pain in his bowels, attended with trifling evacuations, he sees cordials are good in some of these cases, and slight opiates—he takes them, they give him relief for some time—they return more violently, he has recourse to the same remedies, 'till an inflammation comes on—considering the intervals of ease he has obtained, he has no conception how this can arise—let him be informed of the structure and nature of the bowels, he will soon understand that they are subject to irritating causes, liable to inflammatory affections; and readily conceive why those irritating causes must be removed before cordials and opiates should be taken; which he could never do without such knowledge of the parts. Indeed, I believe for want of this many have fallen sacrifices.

The parts being shewn in their simple state, I have next spoken of them collectively, shewing the nature of different CONSTITUTIONS, which are formed by the combinations of these. I conceive this knowledge essential necessary towards the preventing of disease, palliating such as are incurable, and conquering those which lie within the reach of our powers; for there are a variety which require particular attention, in order that full effects may be given to our regimen, and medical treatment; for, without the one is properly adapted to the other, we shall not only be foiled in our attempts to cure; but the very means used for preservation from, will be instrumental in bringing on disease, which too frequently proves mortal. This we need not here farther elucidate, as what we have said in the former part of the preface, and in the introduction, render it unnecessary.

Thus far the parts of the machine to be acted upon have been considered. It remains now to speak of those which are the agents, the NON-NATURALS, so term'd, and MEDICINAL SUBSTANCES—the first of which have called forth my attention, in order to shew the great influence they have on, and how by being properly managed, they contribute to keep the
body

body in a state of health ; for it is almost solely on them that we must depend for this purpose---for good air---proper aliment, moderate in quantity---suitable exercise and rest---with due subordination of mental affections, form the best plan for our bodily security—we have therefore endeavoured to shew how they act under different circumstances, and how necessary it is to lay down rules with respect to them ; which, by observing, supply the most pleasing consequences—freedom from pain; vigour of mind, and a placid old age ; and, by neglecting, the contrary extremes---besides, we have considered some of them with respect to their powers as medical substances, and shewn how they act, as by these means we might afford an opportunity of properly combining the two, that they might assist in strengthening, and not, by producing contrary effects, counteract each other.

As for medicines, there, perhaps, my reader may consider me too systematical, as I have preserved the terms of the schools; and reasoned too abstractly, perhaps, according to his comprehension. However, when it is known that I have given the derivation of every term, and explained the powers of each class, as commonly conceived, in a manner to render them in this place easily intelligible ; for the terms themselves, once understood, are infinitely more expressive, and involve more ideas than any other which might be thought more familiar, I shall, I hope, stand excused, as well as for dwelling upon the powers which medicines exert ; for it appeared not only necessary to speak of the good that was likely to accrue from this action, but also of the mischief which they might create, injudiciously applied ; therefore I was to exhibit them in different views, that it might be known where their exhibition was safe, where uncertain, or perhaps detrimental---because a medicine may be proper respecting a complaint to be relieved, but its mode of action injurious to the constitution---for instance, costiveness is to be removed, if it should be attended with heat and pain in the bowels, shewing that in them there is a great irritation, and that the blood must circulate too freely, the stimulant purgatives, are improper, (173.)---if there should be coldness in them, and the blood circulates uncommonly slow and languid the cooling, (171.) should not be used---and if habitual costiveness be an error of the habit, the astringent kind, (172.) should be avoided.

I should be taxed by some of my female readers with inhumanity, if the rising race of infants were forgotten, with whom many have said little is to be done. Take them from the indulgence of fond parents ; the vanity, ignorance, neglect, and selfishness

fishness of conceited nurses, I believe very little would be necessary; save where they, like adults, were liable to be affected with accidental complaints, and then properly nursed, they would be more readily cured. To the former I can only reply; my animadversion must yield to "who can help it." I lament the misfortune of the infant, and pity the feelings of the parent, whose partiality lays the foundation for ten thousand heart-aches—and to the customs of the latter, with all their train of poisons, I oppose the plain directions given under the article Nursing—to the perusal of which I recommend all mothers, and rational superintendants, and leave it to speak for itself; it is uncomplicated, founded upon facts deduced from observation and experience, and supported by the voice of reason.

The parts of which we have here spoken form what is necessary to be understood before any one should enter on the practice of physic, as without these the adventurers sail upon the bosom of a dangerous sea, divested of rudder and compass. It must be so clear to common observation, that I shall consider it admitted; and proceed to close with the account of the practical part—and here I have laboured to be as simple, and usually concise, as the nature of such a work would admit.

After shewing the tendency of the disease in general, I have particularised the description of each, that is, collected the symptoms which have happened, forming its history; but as the whole of these do not always occur, yet still would burthen, from their number, the memory of those who have slight knowledge, or are totally uninformed—out of those I have selected the characteristic signs, by pointing out such symptoms as are agreed always to attend, laying down before the remote or immediate causes: because if it appears that the patient has been in the way of the former, it increases the probability of his being attacked by the latter, which give origin to the disease. In this there seems to be a peculiar advantage, because the immediate cause or causes being remembered, leads us fairly to account for a number of the symptoms by which the patient may be oppressed. This needs no exemplification, on comparing one with the other, it will appear obvious.

With respect to the medicinal substances, a catalogue is given of them classed under different heads, with the common doses annexed, and also a variety of formulæ—in the first place, for the purpose of supplying a number of materials possessed of similar powers, though in different degrees, under one head; that the prescriber might have an opportunity of making his own election, and varying them as particular circumstances might require; besides empowering him to prescribe in the most simple manner—

in the second, to shew the nature of medical composition, how and in what forms particular ingredients might be united ; and here I must observe, that the compound medicines I have used are chiefly those of the last London dispensatory ; where they are not, they are particularly specified from whence taken.

There are, also, other advantages in this work, which will be to young students of no little consequence ; for here they will be relieved in their investigation of the real meaning of technical terms, as they are either explained in the body of the work where they occur, and references made in the Index, or in the Index itself ; and the various articles referred to different places will shew them the different powers they possess, as well as the best modes of composition—for instance—myrrh is referred to 143. 164. 183. 193.—by these it will be shewn, that it is a stimulant—expectorant---emenagogue---and antiseptic, and the rest of the numbers following the letter F. will refer the reader to the different forms in which it is prescribed.

Such, then, my plan, such my reasons on which I risque its support. It is not for me to determine whether it is happily conceived, or well executed. Some things have I borrowed, much altered, and many additions made, wherever I thought it might answer any good purposes ; for my intent was—

To give rational information to those, who, not being properly educated, are obliged to practise from necessity ; declaring, at the same time, my wish to stop the daring hand of inconsiderate rashness, bold from ignorance, and careless from contempt of social duty,

To convince those who are led by humanity, or whom instinctive whim, too oft mistaken for that virtue, prompts to visit the miserable roofs of sickly indigence, that something more is necessary to constitute the medical pilot---to convince them, that in family recipes, and borrowed nostrums, there is little success, and less security---that if stimulated by the desire of doing good, the materials to which they should be limited, lie within a narrow compass--warmth--decent cloathing, moderate living, industry, and cleanliness. These form the regimen of conscientious elegance ; and are, nine times out of ten, the poor man's best prescriptions--these are the powerful cordials--these the restoratives of a good Samaritan--and with these every hospitable house-wife would be a physician superior to an Hippocrates without them.

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INTRODUCTION.



SECTION I.

WHEN we reflect on the precariousness of man's existence in this life, the multiplicity of dangers with which he is surrounded, even from the first moment of his being to his ultimate stage; and also that the fabric of his machine is so formed, that the means necessary for its preservation are so many instruments wearing out its powers and conducting to dissolution; and, at the same time, consider, that he is subject to an immense variety of diseases, which often occasion him to drag out a life of pain and misery; nay, frequently cut him off even in the bloom and vigour of his age: it will not appear extraordinary that many men of the first, and most distinguished abilities, have devoted themselves, not only to the study of Medicine, in order to cure those maladies, by which man is constantly attacked; but also prevent their origin, or the mischiefs which are apt to succeed.

From the time of GALEN, who has, upon this last subject, written most elaborately, to the present day, we have had various publications, calculated to instruct mankind in the Art of preserving Health, preventing Diseases, or shortening their Duration by the use of judicious applications: indeed, of late years, their particular documents have been studiously conveyed in such a style, as to be readily intelligible to common understandings; so that each man might become, in some degree, his own Physician. Such laudable undertakings merit the highest praise, and, if well conducted, promise the most salutary consequences; for there can be no doubt but the modes of preventing Diseases, shortening their Duration, and warding off their evil tendencies, by early assistance, are not only the easiest, but safest, and most pleasant.

What has been written on this subject may to many, perhaps, appear sufficient: and so it probably might be, were all men's constitutions similar; for the methods advised by many of those authors, are selected with great judgment, and extremely well calculated to answer the ends proposed, under the circumstance above specified; but there seems to be a very great defect in all

the publications which have treated on these subjects—they give no information to their readers how the variations of constitutions are to be distinguished, or in what cases the methods are properly to be altered; and without this the prescribing of remedies can be considered little less than a species of quackery, by whatever authority it may be sanctioned.

The universality or generality of any medicine furnishes the idea of the most flagrant absurdity, suitable only to the arrogance of every ignorant impostor; and certainly appropriating remedies of the same specific nature to one complaint in all constitutions, however dissimilar, is, at least, a branch of the same tree; for it is a fact uncontrovertible, supported by the soundest experience—that what may be of great service to one constitution, may to another be highly detrimental, though labouring under the same affection.

To elucidate this, I shall adduce a very familiar example—to many of my readers, perhaps, experimentally comprehensible; I mean the mode of obviating the effects of INEBRIATION.

Under this circumstance we will suppose a man of strong stamina—full habit of body—with good digestive powers, and a nervous system acting with firmness and regularity; and one, of a relaxed constitution—not abounding with blood—a weak, delicate stomach—and the nerves easily irritated—

The advice to alleviate the constitutional disturbances occasioned by this indiscretion—is lying in bed, and promoting perspiration by plentiful dilution, that is, drinking copiously of weak tea—small broth—thin gruel—weak white wine or vinegar whey—or some such liquors warm, that the superabundance may be evacuated with which the patient has been loaded, and the body soaked, *as it is termed*, into its sober standard. For the robust man the advice might be proper—for by the surcharge of the vascular system, and the stimulus of the intoxicating liquids, his habit becomes nearly to assume an inflammatory disposition, discovered by pain and a sense of fulness of the head; redness of his eyes; quick strong pulse; much heat, and great thirst—which are the general concomitants of such a debauch; and thus he requires abstinence, evacuation, rest, and dilution for his alleviation. But the same mode, applied to the other, renders all his constitutional defects worse, he experiences the uneasy sensations of languor, sickness, oppressed spirits, and undescribable sinkings—all increased by such a regimen; whose good consequences are derived in the former cure from relaxation and debilitating the system. The delicate constitutioned man requires fresh air, riding on horseback, a glass or two of generous wine, or some cordial, such as will invigorate the pow-

ers of his habit, promote vascular action, strengthen his stomach, increase insensible perspiration, and thus conquer those unhappy feelings he labours under from increased weakness and debility. Simple as is this fact, and of little consequence as it may be thought, the same peculiarities occur in diseases of the most alarming nature; and I am persuaded that it is from ignorance or inattention in this point, that people are apt to increase their maladies, nay often make that, which would, left to itself, have been mild, become dangerous by applications not adapted to the particular nature of the constitution. For as curing diseases depends on the knowledge of this particular, by which we can more certainly appropriate our remedies to the benefit of the afflicted, so doubtless must it be a more essential point in preserving from, preventing, and shortening their duration, as in all our endeavours we must attempt to keep the constitution in, or bring it to a state of health, consistent with the principle of its formation, and the nature of the particular parts of which it is formed—and how can this be accomplished without the peculiarities of the constitution are known to the person applying remedies, or fixing on any regimen?

In order, therefore, to attain this point, as these sheets are addressed to the un-informed, it appears unavoidable to give some account of the human machine, with regard to the structure, dependencies and action of its parts, before we enter on the means to be used in particular cases, that every man may be informed of the materials upon which his remedies and regimen are to operate; be able to discover their particular state, and hence proceed with some degree of regularity and certainty.

Now the human machine consists of **SOLIDS** and **FLUIDS**, differently disposed, for the purpose of supporting each other; so that as the parts are worn away or destroyed by the necessary actions of life, they may be again supplied; and this diminution and accession preserves a constant routine, until the animal agreeable to the laws of nature, is destroyed by its own exertions, the machine being rendered incapable of continuing its vital actions: thus, without any preternatural cause, gradually descends to the grave.

But in order to promote the different purposes allotted to the solids and fluids for the well-being of the human body, they are variously divided.

The **SOLIDS** into bones, cartilages or gristles, ligaments, muscles with their tendons, nerves, vessels, glands, and membranes.

The **FLUIDS**, into blood, nervous fluid; perspirable matter flowing through the skin insensibly, or in form of sweat; saliva

separated by the glands of the mouth and throat ; ear-wax ; mucus ; gastric and intestinal juices, liquids secreted into the stomach and bowels ; cystic and hepatic biles, separated by the liver, lodged in part in the gall bladder, in part emptied into the first bowel called duodenum ; pancreatic juice, or that of the sweet bread ; urine, semen, liquor of the prostate gland, and that fluid which moistens the internal surface of all cavities ; the glary mucilaginous liquid of the joints called synovia ; tears, mucus of the nostrils ; a white nutritious fluid separated from the food in the intestines, called chyle, lymph, fat, and marrow.

It will not be necessary to give prolix accounts of the different component parts of the human machine ; but only such as may enable our readers so far to understand the anatomy, as to furnish ideas sufficient to assist them in pursuing the future subject with some requisite degree of accuracy.

CHAP.

C H A P. I.

Of the BONES, CARTILAGES, and other component Parts of the Body.

THE BONES are the hardest, and most solid parts of the human machine, calculated to support those which are soft and less firm, in all their motions and pressures; they are covered with a membrane, or thin bladdery substance, called periosteum, on account of its covering the bone, which is exquisitely sensible, being plentifully supplied with nerves and blood vessels. The outsides of bones are commonly more compact than the inner parts; and are formed of plates, joined together by transverse fibres; their insides are spongy and cellular, in which is contained marrow, within membranous bags, filling up the cells; this marrow, being more or less distributed over all the bones, and transuding through their plates and fibres, makes them tougher, and less brittle; the bones are supplied both within and without, with blood vessels and nerves.

CARTILAGES or **GRISTLES**, are solid, smooth, white, elastic substances, between the hardness of a bone and that of a ligament, (*see ligament below*) covered with a membrane called perichondrium, because it covers a cartilage, which is akin to the periosteum of the bones; they serve to make the bones, whose extremities or ends they cover, move freely in the joints: they limit the growth of bones, as to their length, by hindering the bony fibres from sprouting out; and, therefore, when the cartilages in the joints are eroded, an immobility is there formed, called ankylosis, or stiff joint, by the elongation and coalition of the fibres of the bones that are articulated together; sometimes they serve as ligaments to join the bones together, and sometimes they do the office of bones to greater advantage than these would do; as the cartilages of the ribs, which, by their elasticity chiefly contribute towards expiration; the cartilages that make out brims of cavities, &c.

LIGAMENTS are white, tough, flexible bodies, thicker and firmer than membranes, and not so hard or solid as cartilages, without cavity; difficultly stretched and with little elasticity; they serve to connect parts together, and keep the part to which they are fixed in a proper situation, as appears remarkably in the joints or articulations; they are made up of fibrous layers or strata; the largest and strongest of which run lengthwise.

MUSCLE.—This is the name of the immediate organical instrument of motion in the animal body, whether voluntary or involuntary;

involuntary ; it is called organical, because mere elasticity is the immediate cause of some motions, as in expiration*.

The general characteristic of a muscle is, to consist of fleshy fibres which, when acting, contract themselves, and become shorter ; this contraction, according to different circumstances of the muscle, and the parts to which it is fastened, produces different effects, and different motions.

If one end of a muscle is tied to a fixed part, and the other to a moveable one, when it acts, its fibres contracting will pull the moveable part to that which is fixed.

If both the parts, to which the extremities of a muscle are attached, be moveable, by its action, they will be both drawn towards each other.

If the muscle be hollow, and contain a fluid, when it contracts, it will press upon, and endeavour to expel its contents ; such a muscle as the heart, and in some measure the stomach, and urinary bladder.

If the fibres of a muscle return upon themselves, in the form of a ring, when they contract, they will diminish the area within that circumference, making the circle narrower. Such muscles are employed to shut cavities, and are called sphincters, because they have the power of closing cavities and restraining the exit of any thing they contain.

TENDONS.—These are continuations of fleshy, muscular fibres ; each tendon being divisible into as many fibres, or rather bundles of fibres, as the muscle itself is to which it belongs ; but the tendinous fibres are more compacted and smaller, drier and harder, than the fleshy fibres ; they are not capable of contraction, but serve like ropes to pull, when the fleshy fibres act, for the commodiousness and firmness of insertion, and for the direction of motion.

NERVES.—These are soft white cords, proceeding either from the brain or spinal marrow, and running to every minute part of the body, and are the immediate instruments of sensation, and indispensably necessary for the continuance of muscular motion. They are supposed by many to contain a very subtil fluid, but appear without any cavity discernible even by the finest microscope.

VESSELS in the machine mean the animal tubes or canals through

* The arteries have been supposed by some to contract themselves after distension by this elastic power ; though they may in some degree, yet not totally, for they certainly, and I believe it is generally allowed, act by the contractile power of their muscular coat, as may be instanced in blushing—and their sudden increase of action from other local irritating causes, and some nervous affections.

through which fluids or juices move; the least imaginable vessel is made of the least membrane, rolled up in the form of a hollow cylinder, or part of a cone. The vessels, as their coats must be thicker, are composed of thicker membranes, upon which smaller vessels run.

These are divided into ARTERIES, VEINS, ABSORBENTS, SECRETORY vessels, and EXCRETORY ducts.

ARTERY.—This is the name of that kind of vessel which, arising originally from the heart, contains a fluid whose motion is directed from thence towards the extremities and surface of the body. The larger and easily visible arteries contain red blood, are of a conical figure---flow, tapering from the heart forwards, and ramifying variously; in living animals they beat, or have what is called a pulse, answering to the motion of the heart; their coats look whitish, and are pretty thick and strong.

VEINS.—These contain a fluid whose motion is from the extremities or surface of the body towards the heart; their coats are thinner and more transparent than those of the arteries, and, therefore, they appear of a bluish, livid colour, the blood shining through them. In many places they have valves within them, which open towards the heart, and shut the contrary way.

ABSORBENT VESSELS.—So called, because they absorb or take up fluids, and are divided into LYMPHATICS and LACTEALS, from the particular liquids they convey to other parts---they are similar, only have different origins, and calculated for different purposes, from whence they take their names, the former convey the lymph or aqueous fluids, the latter the milky juice, formed from the aliment in the intestines called chyle; the lymphatics are the general absorbents, and carry the juices to what is called the receptaculum chyli, thoracic duct, and left subclavian vein; the lacteals to the receptaculum chyli, or receptacle of the chyle.

The *lymphatics* and *lacteals* are very fine vessels; the former of which arise from the surface of the body, and all cavities or cells of the cellular membrane; the surface of the intestines, of the urine and gall bladders, of the ventricles of the brain, and of all other parts, and carry a pelucid liquor towards the receptaculum chyli, and the thoracic duct, in which, like the lacteals, do they all terminate.

SECRETORY VESSELS.—These are all those tubuli or minute tubes, in the different organs, which are adapted for the purposes of secretion, presumed to separate and strain off the different humours from the general mass of fluids.

EXCRETORY VESSELS are those tubes or ducts which also belong to the different organs of sensation; whose office is to carry

carry off the humours that are separated, and either convey them to their appropriated receptacles, where some of them are deposited, or discharge them out of the body.

GLAND denotes in general an organical texture, of a circumscribed figure, framed so as to separate from the blood, a liquid, different from, and unlike the blood; of these are various kinds, some more simple, others more complex or compounded, and are called by the common people, kernel.

MEMBRANE.—This is a web or rather a lamina, or slough formed of a very thin substance, appearing like a bladder, whose thickness bears a very small proportion to its breadth and length. Most, if not all the membranes, we see in the animal body, are composed of, and resolvable into thinner ones.

FIBRE is a small thread or filament, without a cavity, at least without one visible; whose breadth and thickness bears a very small proportion to its length; the least fibre of all is too minute to be perceived by our senses, however assisted. The fibres we can perceive, are no other than so many bundles of smaller ones tied together.

Now these are the different solids of the human machine simply considered, and being differently disposed and united, by means of the cellular membrane, of which we shall soon speak, form the human body. This is divided into the **LIVING SOLIDS**, called *solida viva*, and into the **INERT SOLIDS**, called *solida inertia*, which constitute the hard parts, and help to complete the cellular system.

These are again divided by physiologists, or those who treat of the human body and teach the uses of its various parts, into three systems. The **VASCULAR SYSTEM**—the **NERVOUS SYSTEM**—and the **CELLULAR SYSTEM**.

The **FIRST** of these has the heart for its center; that is to say, all the tubes or canals which are comprehended in this division, either carry fluids out from the heart, or return and convey them to it, and comprehend every species of *artery*, *vein*, *sinus*, *duct*, and *absorbent vessel*, and may be distinguished into *circulatory vessels*, *excretory vessels* and *absorbents*; vessels through which the blood circulates, by which particular fluids are separated from it, by which these last are carried from the place where separated, and by which fluids are taken up, and carried into the machine.

The **CIRCULATORY VESSELS** include all the arteries, which springing from the *aorta* or large artery of the heart, and that called pulmonary, supplying the lungs, carry out the general mass of blood, and all the veins, which being reflected back,
and

and uniting at the two great sinuses of the heart, return it, and thus maintain perpetual circulation.

The *secretory, excretory vessels*, and *absorbents*, we have before explained.

The **SECOND** or **NERVOUS SYSTEM**, has the brain as its basis, from whence issue different portions called medulla oblongata, spinalis, and nerves. Some affirm that there are two sets of nerves—the one adapted principally for the purpose of perception and sensation, bestowed on the several organs of sense, internal and external; while the other is blended with the muscular fibres, because it is observable in certain diseases, that the muscular strength shall be totally exhausted, and yet the powers of perception and sensation remain entire; and on the other hand that the muscles shall sometimes exert prodigious strength, while the senses are all locked up, hence the authority on which is founded the distinction.

But we must observe, that though all animal motion seems to be derived from the nervous system, and although the heart, like every other muscle, can act no longer than the communication through the nerves which are bestowed on it, remains free; yet there is a necessity for distinguishing between the vascular and nervous systems; because it will appear, when we come to inquire into the nature of diseases, that there may be evident disorder in the one, while little or none shall appear in the other; and this consideration will greatly influence us in the directions necessary to be given for procuring relief. *THESE form the living solids.*

The **INERT SOLIDS**, not only constitute such parts of the body as have neither nerves nor vessels; viz. the cuticle and its continuations; the nails; the hair; great share of the substance of bones; cartilages; ligaments; tendons and their membranes: but these inert solids form the connecting medium every where between the living solids, binding together every minute vessel and nervous filament; and there are innumerable nerves and vessels in all parts of the body, except those above mentioned, which no eye can trace; yet, if we reason from analogy, and say, that the smallest branches and filaments are like the visible trunks and cords, then the transverse section of these must be circular; and consequently, when they come to be interwoven or laid together, they must universally leave intermediate pores, and minute cavities; hence we may understand, that though there may be some parts of the body, which have neither nerves nor vessels, i. e. *no living solids*, yet there is no place in the whole fabric to which the cellular system does not extend, and where there is not some mixture of inert solids; besides u-

ning and binding together the different species of vessels, which either rise from or terminate at the heart ; and all the nervous cords or filaments, which spring from the brain or spinal marrow, however variously they may be combined, disposed, or interwoven ; and this fibrous and laminated connecting substance is not endowed, like the living solids, with either sense of feeling or power of motion.

That the CELLULAR SYSTEM extends itself universally throughout the whole frame, and has a general and free communication, seems fully proved by some particular diseases, such as universal dropsy, called anasarca ; where water diffuses itself through the whole body ; or emphysema, where air occupies the same space, passing from pore to pore, and cell to cell ; for this membrane consists of a number of little cells, hence its name, which in many parts communicate with each other.

In the natural and healthy state, the cavities of the cellular system, are either filled with a thin fine fluid called lymph, or with oil—hence it is distinguished into two parts, the lymphatic and adipose, according to the substances it contains.

The pores, or minute cavities of the lymphatic part, are always to be understood as interposed between every nervous fibril ; whereas the adipose cells are not so universally extended, the fat or animal oil being always lodged in distinct bags or vesicles, else, was it suffered to diffuse itself as freely through the cellular system at large, it would be equally distressing and fatal with the spreading of water in an universal dropsy, or of elastic air in an emphysema.



C H A P. II.

Of the BRAIN, and the other more complex Parts of the Machine.

HAVING now shewn the solid principles, and the systems of which the human body, aggregately considered, consists, we shall take a view of some parts which are formed out of these, with their fluids and uses, and give such accounts as may be requisite for the proper information of our readers, to enable them to discover what parts are affected in particular diseases, and distinguish their nature. We therefore begin with the BRAIN, which is a soft pulpy substance, surrounded by two membranes, one called *dura*, the other the *pia mater*—and has also a third called *aracknoid*, from its fineness, similar to a spider's web—the chief peculiar-

peculiarities to be taken notice of for our purposes are the **SINUSES**, which are nothing more than large veins or receptacles for blood, and the **VENTRICLES**. Like other parts of the body it has a variety of arterial branches coming from the heart, which are diffused through its substance, and on the membranes—from this is derived the whole nerves of the human machine, as the spinal marrow is no more than a continuation of the brain through the vertebræ of the back—and this is considered the source of all perception, sensation, and support of muscular motion.—It is not considered in itself very sensible, but can transmit most acute sensations to every part of the body by means of the nerves, when in a state of health—and most violent ones when diseased; there is not the smallest portion of the living solids but is materially connected with it—so that it not only gives strong impressions to, but feels strong impression from the smallest portions when affected; and it may be considered the fountain of all nervous incitability, by which all the parts dependent upon the nerves are put into motion, or continued capable of persevering in their action.

And here, as we shall often have occasion to speak of **NERVOUS INCITABILITY**, and **MUSCULAR IRRITABILITY**, two powers to which we allow the existence of the machine, in a living state, and the action of all its moving solids with respect to their continuance, are entirely owing, it will be proper to describe what we mean by these two terms; because they certainly do in some degree exist independent of each other, notwithstanding their intimate union, and in general conjunct action—and also, as by this knowledge, we shall in some cases be able to discover, how from particular defect in these two powers, separately attended to, diseases put on different appearances—and are to be prevented, alleviated, or cured by our applications made to them distinctively as well as unitedly.

By **INCITABILITY** we mean that power in the brain and nervous system, which may be put into action by mental affection, as well as local irritation, and which produces those appearances we call sympathetic.

By **IRRITABILITY** we mean that power which may be put into action by material stimulus locally exerted—yet is obedient to the influence of the nerves in general—and cannot, in the living machine, exist for any considerable time without this union.

To elucidate this, we shall observe that many will be thrown into convulsions by uneasiness of mind---we also know that the same complaint will be occasioned by severe irritation on some part or parts of the machine; or that parts themselves only will,

from this source, experience such effects---as in cramps. Now as we are totally ignorant how the mind acts upon the brain, and nervous system---how these act upon the muscular fibres---nor can we conceive how immateriality, which we take the thinking faculty to be, can act upon materiality, we can by no means make use of a term which points out specifically the action of these causes productive of morbid effects

In order then either to prevent, alleviate, or cure the complaint from thence arising, we prescribe such things as may amuse the mind, and keep it free from those painful reflections---and put the body into such a state as to render it less susceptible of impressions from this source.

On the other hand, we advert to the part or parts affected, and by our applications locally directed endeavour to remove the irritative cause in order to promote a cure---and with intent to prevent a return, do such things as to render the part or parts incapable of being affected by the cause, or put under such circumstances as to render the accession of that cause impracticable---hence we think the discrimination between the two terms absolutely necessary---as we shall in advising remedies always pay the strictest attention to constitutional peculiarities.

The LUNGS are situated in the chest, and there divided into two large portions called LOBES, the one on the right, and the other on the left side, which are separated from one another by a transverse membrane called mediastinum---dividing the chest into two equal separate cavities, that have no communication with one another : but the left lobe of the lungs is considerably less than the right, because the heart with its membrane, called pericardium, from its surrounding the heart, with the great vessels that open into it, are contained in the left division---The lungs, besides their external membrane, and cellular texture of which they are composed, are a congeries of air vessels from the wind-pipe, which is a firm tube, made up of cartilaginous or gristly rings, joined together by muscular fibres---these rings backwards are incomplete ; this descends into the breast almost to the basis of the heart, and there divides into two great branches, the one right, and the other left ; which again are divided and subdivided into lesser and lesser ramifications---and so distributed through all the substance of the lungs, terminating at length in small membranous, dilatable cells, or vesicles---as well as these, there are vessels which carry blood, and juices derived from the blood ; and these two kind of canals are so uniformly dispersed through the lungs, that in every physical point there are branches all over, besides these they are supplied with nerves and absorbents. Various are the uses of this organ.

The most important is that of *respiration*, by which a trajec-tion of blood is effected through their substance, and circulation completed, in which life consists; by comminuting, condensing, and rounding its particles, and thereby adapting them to flow through the canals of different sizes in the body; creating red-ness in its globules---besides it has several uses which are of the greatest consequence to the animal, for by this means the abdo-minal viscera are with a continuance alternately pressed upon, and freed from that compression; by which means concoction in the stomach and intestines is promoted; and the circulation through the system of the vena portarum, or large vein of the liver, which otherwise would be too sluggish, is urged on. The fæces and urine are expelled by its efforts; smelling is perform-ed by inspiring, or snuffing up air; the fœtus is excluded by its assistance; and suction, so necessary for the preservation of the new-born animal, is performed, and without it there could be no such thing as voice or speech brought about. Besides, the lungs are considered as the recipient of animal heat, that is, the quantity of atmospheric air which rushes into the lungs at every inspiration being loaded with those particles creating heat, they are separated from the air and pass into the blood, and by their evolution through the course of circulation form an universal sti-mulus to the vascular system--and at the same time they perform the office of excretion, throwing out such matters which have become useless, and would be hurtful if continued in the habit.

In the middle of the chest between the two lobes of the lungs, rather inclining in its position to the left side, lies the HEART. It is a strong hollow muscle, having two cavities, separated by a septum or division, which are called ventricles, out of which issue the two large arteries of the human machine---one called pulmonary artery, because it serves the lungs; the other aorta, or large artery of the body; near the mouths of these two ven-tricles are two other hollow muscular substances, from their simi-litude to dogs ears, called auriculæ, into which the vessels call-ed vena cava descendens, and ascendens, and pulmonary veins open---the two former into the right, the latter into the left. It is also enveloped with a membrane from its situation, surround-ing the heart, called pericardium, by which, and the large ves-sels, it is kept in a fixed position, within this membrane there is a small portion of a serous fluid.

As we have considered the brain to be the source of all *incita-bility*, so do we the heart one at least, and that the principal source of *irritability*, whose chief office is to promote the circula-tion of the blood, an account of which may not in this place be improper.

But

But before we enter on that subject, we must observe, that all the arteries of the machine ramify from the aorta, as branches of a tree from its trunk, dividing themselves into minute ramifications, in which there are no valves, except at the origin; whilst the veins must be looked upon as branches forming a large trunk, in which there are valves inserted, which open to the heart. Now in the former of these vessels there is required no such contrivance, because the blood, having a quick progressive motion from the contractile power of the heart and arteries, has a sufficient force impelling it from behind, which prevents its retrocession, whilst, on the other hand the slow motion of the blood in the veins and their weaker contractile power, unassisted with a force adequate to that of the heart, have great need of such an invention to prevent its regurgitation, and secure its return to the heart.

Now for a moment let us suppose the heart full of blood, that is, the ventricles have ceased to beat, and that it is put into motion by some cause, what will be the result with regard to the circulation? The lesser circulation through the lungs will be performed in the following manner; the blood will be propelled into the pulmonary artery from the right ventricle, pass through the lungs, and return to the left auricle by the pulmonary vein; in the same manner in the greater circulation it will also be forced into the aorta, diffused through the rest of the machine, and return to the right auricle by the vena cava, passing through the different glands, in order for them to secrete such fluids as they are destined for; whilst, at the same time, the capillary or hair like tubes, where there is no such glandular contrivance, will pass off the matter of perspiration, the auricles then being filled with blood will contract; eject their contents into each ventricle, and the same routine be performed again as above described.

The particular organs which we have now mentioned must be looked upon as the three most material ones for the support, and preservation of life, and the sources and instruments of *incitability*, and *irritability*, by which they perform their actions, and on which all the moving powers of the machine depend; but into the account we must also take the blood, which, with the lungs, we consider as the recipient and diffuser of that fluid, or those particles which animate nature, and supply an universal stimulus, which occasions the action of these sources and instruments of vital motion.

The BLOOD is a red homogeneous or apparently uniform fluid, as it circulates in the vessels, from whence all the other fluids of the human machine are secreted, or separated; but
when

when out of the body, and left to itself, divisible into three distinct substances---*serum*, *gluten*, and *red globules*, by a very simple process; though untouched, appearing only as two, called *serum* and *crassamentum*, the latter floating in the former; but the crassamentum is of different degrees of firmness in different subjects.

The SERUM in an healthy state is almost colourless; at other times, it is yellowish, or perhaps of a greenish hue, while the top of the crassamentum has different degrees of firmness, and puts on different appearances with respect to colour, according to the age, sex, and state of health of the subject from whence it is taken. The serum of the blood, like the white of an egg, coagulates when highly rectified spirit of wine, called alcohol, or any of the mineral acids, are mixed with it, or when heated to about 160th degree of Fahrenheit's thermometer; but otherwise it continues in a liquid state.

The CRASSAMENTUM is composed of a peculiar substance, which gives redness to the blood, and of, what physiologists term, coagulable lymph, from its coagulating spontaneously: This coagulable lymph may be separated from the red part in two ways; either by stirring the blood which is fresh drawn, with a whisk, when the lymph coagulating in a short time, will adhere to the twigs, and appear like a firm membrane of a whitish colour, composed of fibres interwoven with each other; or by placing a piece of crassamentum on a strainer, and pouring on water repeatedly, until the red particles being washed away shall leave only the whitish substance behind.

With regard to the red globules, it is not perfectly agreed of what nature they are; but it is asserted that the red colour is owing to a mixture of some portion of ferruginous or irony matter; in confirmation of which it may be observed, that the blood always becomes florid after a course of medicines of that nature; but whether it arises chiefly from the addition of ferruginous matter, or owing to the increased motion which these medicines always produce, will admit of some dispute, for it is always found that the blood grows more red, in proportion to the action and the strength of the vessels, and these medicines are allowed to produce such effects.

The proportion of the red part is small in respect to the other constituent parts, for one grain weight of this colouring matter, will tinge, in a perceptible degree, a thousand of pure water.

Now as the blood in its healthful state is a tenacious fluid, capable of receiving a greater portion of heating particles in proportion to its tenacity, as it passes through the lungs, so according

cording to its stronger or weaker tenacity, will it be capable of retaining more or less of these stimulating particles, thus from this cause, will it be more or less stimulant, and assist in producing different deviations in the constitution, besides it is from different causes liable to undergo many alterations; hence also will other differences be formed, of which we shall take notice in the succeeding pages.

Indeed we might give some general practical ideas respecting this point; but as many peculiarities arise from the state of other organs in the machine, that are worthy of observation, and necessarily combined with those already pointed out; we must now beg leave to describe them also with their uses, but first we shall say something on—

The THORAX or BREAST. This is a large cavity, somewhat in the shape of a cone, reaching from the lower part of the neck to the abdomen or lower belly, from which it is divided by the diaphragm, or midriff. The bones which form this cavity are twelve vertebræ of the back behind, twelve ribs on each side, and the sternum or breast bone before. This cavity is considerably shorter before than behind, from the diaphragm slanting downwards, and backwards. The ribs which guard the greatest part of the cavity of the thorax, are all articulated with their respective vertebræ, in such a manner as to admit of a motion upwards and downwards; they are all, except the lowermost or twelfth rib, connected and articulated with the sternum, or breast bone; by the intervention of cartilages, or gristles, so as to admit of the same motion upwards and downwards.

From the structure of the ribs which are more or less arched, being convex outwardly, and concave inwardly towards the cavity of the thorax, it follows, that if the ribs are all moved upwards, round their articulation with the vertebræ, their arched middle parts must be pushed outwards and laterally, and the sternum, to which they are joined, outwards and forwards; and consequently, the cavity of the thorax will be widened and enlarged.

But there is a set of muscles which perform this office, which are called intercostals, from their being situated between the ribs, and are both internal and external; they run obliquely from the edges of one rib to those of the ribs nearest each other, for the whole length of the ribs, and from the highest rib to the lowest: the fibres of the external have a direction contrary to that of the internal, by which contrivance their joint action becomes the more steady, and the ribs being pulled in the diagonal of these two directions, endeavour to pull the ribs nearer one another; drawing the inferior ribs nearer the superior, and thus the

the cavity of the thorax is widened, that the lungs may expand themselves in inspiration.

But there is another contrivance to promote this purpose ; the **DIAPHRAGM** or **MIDRIF**. This muscle, which divides the breast from the lower belly, arises from the breast bone before, from all the ribs on each side, from the seventh to the twelfth ; and behind from the last vertebræ of the thorax, and the first one of the two loins. Its fibres run fleshy from the circumference to the center some way, and then become tendinous ; the whole diaphragm slants, its anterior origins being remarkably higher than its posterior ones ; it is not plain, but remarkably convex towards the thorax, and concave towards the abdomen ; insomuch that its middle or center rises always higher in the thorax than its highest origin at the sternum ; when it acts, the fleshy fibres shortening, pulls the tendinous center towards their origin, that is, downwards, thereby rendering it plainer, and less convex, and so lengthening the cavity of the thorax down ; hence the enlargement of the breast is promoted two ways, by the intercostal muscles raising the ribs, and making it wider, and the action of the diaphragm rendering it longer or deeper—and by these means the several uses above specified from the action of respiration, is promoted. See page 28:

Immediately under the diaphragm lies the **LIVER**. It is of an irregular shape—its right part fills almost all, what is called the right hypochondre, or side under the ribs below the diaphragm, in an adult body, when sound, reaching commonly no lower than the short ribs. In the fœtus it is bigger, in proportion to the rest of the body ; in all its dimensions—its middle part lies in the region over the stomach, called epigastrium ; and its left in the upper part of the left hypochondre, not reaching so far down as the right ; some of its exterior parts are smooth and convex, humouring the concavity of the diaphragm ; its under part is concave on the right side, answering to the gut called the colon before, and the right kidney behind ; its middle part, in which the gall bladder, called the vesica fellis is placed, lies over the gut, called duodenum, which touches the gall bladder ; its left part covers the stomach—it is thick in the middle, and upper substance, towards its sides it grows slenderer, at length terminating in a thin edge ; by a furrow in the interior and concave part which receives the umbilical vein, or that of the navel in the fœtus, on its anterior part ; and by another answering to that backwards reaching to the posterior limits of the liver, which receives the venous duct, both which canals are pervious vessels in the fœtus, but in the grown animal degenerate into ligaments, the liver is divided into two unequal parts call-

ed lobes ; the right being much larger than the left ; there is besides, a small lobe in its posterior concave part, commonly called the lobule of Spigelius ; there is likewise a transverse fossa, or furrow, running along the middle of its concave, and under part, in some measure separating its anterior and larger from its posterior and smaller part ; it is attached to the diaphragm, and its weight is in some measure supported by ligaments from that muscle, which are productions from the membrane which lines the inside of the lower belly called peritonæum, where it lines its concave surface, and is united by other such productions, with the neighbouring parts : it is furnished with arteries from ramifications of the aorta, called celiac, mammary, phrenic, renal, and capsular—but it is furnished with veins of two kinds—totally differing from each other, which cannot truly be said of any other part of the body : to wit, the vena portarum, and its branches distributed through the substance of the liver, which perform the office of arteries, carrying blood into it ; and the other veins, which carry blood out of it, emptying themselves into the vena cava, like the rest, all over the body.

As the rest of the arteries and veins may be compared to the trunk of a tree with its branches, so may the vena portæ and its different ramification, be compared to the root, trunk, and branches—for it is formed by a conflux of all the veins, which return the blood from the stomach, omentum, spleen, pancreas, intestines, and mesentery ; and answer to the celiac, and mesenteric, both superior and inferior, arteries.—It is worthy to be observed, that all this venous system, which by its union constitutes the vena portarum is unfurnished, unlike the other veins of the body, with valves ; so that from its trunk it may be injected backwards to the minutest origins of small veins, in all the parts just now mentioned. The trunk of the vena portarum, thus formed, enters the liver between two eminences in the little lobe, called by the ancients, portæ—that is, ridges forming a little channel or streight between them : as soon as it is formed into a trunk it is found to have got stronger membranes or walls than other veins, and even tougher than the aorta or large artery of the body itself. This new and extraordinary strength of the coats of the branches of the vena portarum, they carry with them throughout all the substance of the liver ; and they are distributed from trunks to branches, smaller and smaller, in the same manner as arteries are in the other viscera.

Thus is blood brought into the liver by arteries, called hepatic, of the common sort ; and besides by the vena portarum, furnished with strong coats, and performing the office of an artery, the only instance of that kind in the whole body. The ultimate
small

small capillary branches, both of the hepatic arteries, and vena portarum, terminate in minute venous twigs, which arising all over the substance of the liver, and forming larger and larger branches by uniting together, at length open by several large mouths into the vena cava about the posterior, or gibbous part of the liver.

The liver is supplied with nerves from the intercostal, and par vagum so called ;—they are but small in proportion to its bulk, and therefore it is not liable to violent pains.

The great use of the liver is to separate bile, for many good purposes in the animal œconomy ; and as it is now and then wanted more at some times, than at others, there is in the liver a receptacle for part of this fluid, called the GALL-BLADDER, which is a pretty large hollow vessel, nearly the shape of an oblong pear—situated in a fovea or furrow, in the anterior concave part of the right lobe of the liver, reaching from before backwards ; attached to the liver in different places by a cellular texture, covered over in its under part, by a portion of the membrane of the liver, which reaching beyond it keeps it fast in its situation. Under this, all over its surface, is a cellular texture—next to that, a thin muscular coat, consisting of pretty conspicuous, longitudinal, oblique, and circular fibres ; under that a second cellular—then a nervous ; and innermost of all a villous coat, similar to what is found in the stomach and intestines. There are likewise, especially in its smaller part or neck, pores, which yield a mucous juice, to defend it against the acrimony of the bile : from the same part is produced its duct, which stretching towards the left is inserted into one called the *hepatic duct*, which arises from the repeated union, and conflux of the biliary ducts all over the liver ; the union of these two ducts together forms the duct, called the *ductus communis cholidochus*, which penetrates into the duodenum, or first of the small guts, just below the stomach. Thus we find the bile separated by the pori biliarii of the liver, passes into the hepatic duct, part of which is constantly pouring into the duodenum, and part into the gall-bladder, whose use is to receive the bile, there to retain it, until it be squeezed back again by pressure of the distended stomach, and action of the diaphragm, through the ductus communis into the duodenum ;—by staying there, the bile is rendered thicker, some of its aqueous parts being resorbed by the inhaling vessels of its villous coat, and therefore stronger, and of a more saturated yellow ; it likewise becomes more sharp, bitter, and rancid, by the heat of the contiguous and circumjacent parts ; while the stomach is empty the gall-bladder is at liberty to be distended and filled, and therefore becomes fuller after long fasting ; and

the fuller it is, the less compression of the stomach is required to squeeze the bile out of it—so that the more we are prompted to eat, and stuff the stomach by violent hunger, the greater quantity of bile will be poured into the duodenum, by the swelling of the stomach during digestion, to promote so much more effectually the coction of the aliments; and the cystic bile will be the sharper, and stronger, by having remained so much the longer in the gall-bladder.

So that we find the duodenum receives two sorts of bile flowing into it from the same canal, viz. the hepatic fresh secreted from the liver, which never has been in the gall-bladder, but goes straight on into the intestines, and the cystic also.

Both biles are of the same natures and properties, differing only in degree, insomuch as many species of animals have no gall-bladder, and therefore are only furnished with hepatic bile, as amongst quadrupeds, the *elephant*, *horse*, *ass*, and *deer*; amongst birds, the *ostrich*, whose digestion is so strong, the *stork*, and the *pigeon*—not to mention some fishes.

The BILE is somewhat viscid; coagulable by heat and alcohol; of a saturated yellow colour, inclining to green, extremely bitter; the sharpest, and most stimulating of all the circulating humours of the body, neither acid nor alkali when fresh, but strongly inclining to, and quickly susceptible of, putrefaction; and promoting that disposition in any substances with which it is mixed, if they are capable of it; it mixes readily with water, it flames not in the fire, unless it be dried, and then it burns almost all away; it is a powerful penetrating soap in every respect; it dissolves all gums and resins, being rubbed with them.

By these properties, when poured upon the alimentary mass in the duodenum, it must effect, *first*, a more intimate dissolution and mixture of the heterogeneous parts together, as it is readily miscible with water, and renders oil and oily substances so; *secondly*, though it is not actually an alkali, yet it nearly approaches towards it; and must diminish the acedent disposition of the chyle, of which we shall speak hereafter, and render it more similar to animal nature, which is alcalescent: and *lastly*, by its stimulating power, as it is the most acrimonious of all the animal fluids, it, no doubt, helps to excite the peristaltic motion of the intestines, and thereby promote concoction; and, as like aloes, it is a purgative, which it resembles not a little, it assists in the expulsion of the fæces; so true is it what Lord Bacon says, “*that the bile is the incentive and stimulus of many functions of the body.*”

The PANCREAS, or SWEET-BREAD, so called, is a long, whitish, tender, and friable glandular mass, situated behind the
stomach

stomach and spleen, under the liver. Beginning at the spleen on the left side, it stretches transversely across the vertebræ, and with its other extremity, is connected with the duodenum. In the human adult, it is about seven or eight inches long, and one or more thick; its end at the spleen is smallest, and it grows gradually broader, at it approaches to the duodenum, where it terminates: it hath arteries from the cœliac; its veins run into the splenic vein, which opens into the vena portarum; its nerves come from the par vagum, and as they are but small, it hath, like the liver, but small sensation: its structure consists of small round acini or glandular shoots, connected together with much cellular texture; from each of these, there is a small duct sent out towards the middle; all these ducts open into the principal duct, which runs along its axis all its length, and opens into the duodenum, five or six inches from the pylorus, or lower orifice of the stomach, at the same place with the biliary duct.

As the structure of the pancreas is the same with the salivary glands, so its juice perfectly resembles the saliva in every property—and therefore may be presumed to have the same use—to dilute, open, and dissolve the alimentary mass, and render the chyle, to be made out of it, more similar to animal nature; as it is considerably larger than all the salivary glands put together, and situated in a warmer place, its juice must far exceed the saliva in quantity. It is propelled into the intestine by the common impetus and course of circulation, assisted by the pressure of the adjacent parts upon it in breathing: It is poured into the gut at the same place with the biliary duct, that it may be immediately mixed with, in order to temper and dilute, the bile, which is both thicker and sharper than itself.

The OMENTUM, or CAWL, is a broad membrane, thin and transparent, tender, and easily torn, arising from the anterior and inferior border of the stomach, and falling down commonly as low as the navel, sometimes much lower; then doubling backwards and upwards, is connected with the intestine called the colon, under the stomach, thus forming an empty bag. Besides, its principal connection with the stomach and colon, it is likewise attached to the duodenum, to the spleen, pancreas, and mesentery; it lies immediately under the peritoneum forwards, being a production of its cellular part, and covers part of the stomach, and the greatest part of the anterior surface of the intestines.

It is every where a double membrane—but every portion of the thin membrane, by itself, may be divided into two thinner membranes or sloughs, which are joined together by a thin cellular texture, in the cells of which fat is deposited: the secretion here is performed in the most simple manner, there being no other

ther apparatus besides arteries, veins, and pinguidinous ducts, leading to the cells, or vesicles. The fat is distributed in the omentum very unequally, being in some places thin and transparent, in others an inch thick in fat; in corpulent persons it contains a vast quantity of fat; it hath its arteries from the cœliac; its veins terminate chiefly in the splenic branch, and all of them ultimately in the vena portarum.

The uses of the omentum are, *first*, to interpose between the peritoneum and the intestines, and part of the stomach—that all three parts may be preserved warm, moist, and slippery, and hindered from growing together: and *secondly*, to furnish oily matter for the bile.

The SPLEEN is situated in the left hypochondre, that is, under the cartilages of the left short ribs; it is connected with the colon, stomach, left kidney, and by its upper part with the diaphragm; its situation is changed by the fulness or emptiness of the stomach; it follows the motion of the diaphragm, and is affected by the inflation or subsidence of the colon. In general it is placed upwards, and backwards from about the middle of the short ribs on the left side; in its natural and sound state, it is about six or seven inches long, about three in breadth, and one in thickness, of an irregular and somewhat oval figure, and of a dark livid colour; it receives arteries from the cœliac, these entering its substance, are divided into innumerable branches, and by their evanescent extremities terminate in minute veins, forming, by their union, the splenic vein, which flows into the vena portarum. The vessels of the spleen are very large in proportion to its bulk, and yet it hath no excretory canal but its vein; its nerves are small and few.

As the substance of the spleen is entirely vascular, with a tender cellular texture to support the vessels and keep them together; its chief use has been considered to consist in dividing and attenuating the blood that runs into and flows through it; and from its situation, as it is much agitated, this also assists in the circulation and comminution of the blood through it, and thereby rendering it fit to temper the sluggish mass sent from the omentum and mesentery into the vena portarum, and expedite the secretion of bile in the liver.

As we consider the ŒSOPHAGUS and STOMACH continuations of the same tube, we shall proceed to describe them together, and afterwards make some observations on the intestines.

The ŒSOPHAGUS, or GULLET, begins at, or is continued with the PHARYNX or THROAT, runs down along the posterior part of the thorax, behind the wind-pipe, and most commonly somewhat to its left, passes through the diaphragm, and a short
way

way under it opens into the stomach, into which it conveys the aliments; it is made up of several membranes or coats: the external one is cellular—next to that is the muscular coat, consisting of two pretty strong plains of fibres, the exterior of which are nearly longitudinal, the anterior nearly circular. When the former act, they shorten and widen the tube—thus fitting it to receive aliment; when the latter exert themselves, they render it narrower and longer, and propel the aliment onwards: this alternate action, begun at the origin of the canal, and continued downwards successively through its different portions, one after another, determines the rout of the aliment into the stomach.

Its innermost coat, called nervous, is tough and strong, fit to resist the hardness and roughness of what may be swallowed; it is lined with short villi, standing up like velvet, somewhat in the manner of those of the stomach and intestines, of which we shall presently speak. There are likewise numerous secretory ducts opening into it, which yield a mucous liquid, by which it is moistened and lubricated, in order to facilitate the passage of the aliment through its cavity.

The STOMACH, or VENTRICLE, is situated in the abdomen, or lower belly, immediately under the liver, which covers a great part of it above, and laterally; it is placed transversely, in the main, from right to left, but somewhat obliquely, so that its left or upper orifice, called cardia, which is continued to the œsophagus, lies more towards the vertebræ; and the right or lower, called pylorus, which opens into the intestine duodenum, more anterior. In figure it resembles a bag-pipe; its thickest part being its left extremity, at the implantation of the œsophagus, from which it tapers to the pylorus. The CARTILAGO ENSIFORMIS, or lower part of the breast bone, answers nearly to its middle: the spleen lies contiguous to its lower part, on the left, and the pancreas behind its bottom.

The structure of the stomach is in general the same as the œsophagus, of which it may be considered a dilatation. Its most external membrane is a continuation of the peritoneum; its next is cellular, in which its great branches of blood vessels and nerves run; in it there are likewise conglobate glands and lymphatic vessels. Under this lies the muscular coat—the exterior layer is a continuation of the longitudinal fibres of the œsophagus, which open and disperse themselves over the stomach—and as the stomach is by much the larger of the two, and of an irregular figure, they must of course be thinner, and less numerous in some places than others. They run mostly along the length of the stomach, and terminate at the pylorus; they seem to shorten the stomach, though but in a feeble manner, and
widen

widen its middle. The other stratum or layer, answering to the circular fibres of the œsophagus, is by much the stronger of the two; its fibres run in a general way round the stomach, at right angles with its axis, though with considerable and intricate deviations: they seem like the analogous stratum in the œsophagus, to lengthen the tube they encircle, and contract its cavity, a remarkable plain of this same stratum runs from the left orifice to the right by the shortest way, viz. along the upper and lesser curvature of the stomach; and appears to counteract its other fibres, by drawing the two orifices towards each other. And it is observed, that at the entry of the œsophagus into the stomach, the circular fibres are remarkably thick and strong, which therefore may serve, in some measure, as a sphincter to it, to shut its cavity there; but, upon the whole, the exact course of the muscular fibres of the stomach is so extremely difficult to be traced and described, that hardly any two anatomists, unless they copy from one another, agree in their account of them. It is sufficient to conceive them to be so framed and distributed, as to enable the stomach to press upon its contents every way, and gradually to expel them.—Next to, and immediately under the muscular coat, is another cellular texture, more conspicuous than the exterior one, in which pretty large trunks of blood vessels and nerves run, after having penetrated through the muscular coat. Under it lies that called nervous which is a firm, tough, white, and pretty thick membrane, constituting the principal and most peculiar coat of the stomach. The sixth in number is another cellular web, much thinner and more subtle than the two former—made up of shorter threads and laminae—The innermost of all is the villous coat, so called, because it hath villi, or pile like that of velvet, standing out from it; these villi are small membranous productions, or sheaths containing minute tubuli, both of the arterial and venous kind, opening into the cavity of the stomach. The arterial tubuli pour into the stomach a liquor much more subtle than blood, to be mixed with the aliments for the purpose of digestion—and when the stomach is empty, this liquor growing sharper concurs with the saliva in exciting the sense of hunger, as has been said; the venous tubuli are absorbent, and resorb liquids from the stomach; the innermost or villous coat being larger than the rest, forms wrinkles here and there, more or less conspicuous, but at the pylorus there is a remarkable one; where a duplicature of the coat formed by this wrinkle all round the pylorus, and projecting into the entry of the duodenum, serves, together with the circular fibres of the muscular coat, to contract,

tract, and almost shut that orifice, and let only the thinner parts of the alimentary mass be expelled out of the stomach into the intestine very gradually, and in small quantities at once: over all the inside of the villous coat, there open excretory ducts of mucous glands, seated in the second cellular membrane, which furnish a lubricating liquor, as in the œsophagus, serving to defend the acutely sentient inside of the stomach from the acrimony or otherwise hurtful qualities of what we may eat or drink.

The stomach is plentifully furnished with blood vessels; its arteries all come from the cœliac, and its veins all empty themselves into the vena portarum: it is no less largely supplied with nerves, every branch of which arise from the par vagum.

Now the use of this organ is for the digestion of our food, in order to promote the nourishment of the other parts of the body, as well as itself—and this it is supposed to promote by heat, moisture, agitation, and fermentation—all which, that it is capable of producing, it will be easy to conceive, when we consider its structure and situation—for we find it is almost covered with the liver, lies contiguous to the spleen and pancreas—is possessed of a muscular coat—has large trunks of blood vessels running thro' its substances—lies close under the diaphragm—and fluids profusely excreted into its cavity, and perpetually pressing down the œsophagus—besides its lying over the aorta, or great artery of the machine—and thus the texture of the aliment is broken, the juices they afford set at liberty, mixed with the gastric juices, or those of the stomach, thrown into a state of fermentation, and changed into materials proper for forming nutritious fluids, as far as the first process extends—which are farther perfected when they pass into the intestines, whose structure is similar to that of the stomach---by being mixed with bile, pancreatic, and intestinal fluids; converting them into a white liquor called chyle, which is absorbed by the lacteal vessels, and there in their passage through the lymphatic glands to the receptaculum chyli further mixed and diluted with lymph; from this receptaculum the chyle is carried into the vena cava, thrown with the blood into the right auricle of the heart, thence into the right ventricle, which ejects it into the lungs, by the pulmonary artery, in which organ it is further elaborated, thrown from thence into the left auricle and ventricle, and then into the round of the greater circulation, where it meets with fresh attrition; and thus, in a little time, converted into a perfectly nutritive fluid, which is applied to the particular parts for their support as wanted. But the stomach, besides being the instrument for performing the first process of digestion, is possessed of another material power, that of promoting sympathetic affections in the constitution. These are such affections as appear

in parts far distant from those, where the action of any substance causing such distant affections, are locally acting—as sweat induced by antimonials taken upon the stomach, and only acting immediately on that organ—vomiting produced by a stone stimulating the kidney, &c.—but of this however we shall speak more at large, when we come to treat particularly on this subject—and now proceed to describe the intestines, and their uses—which have been divided, and are six in number, three small, and three large, viz. **DUODENUM**, so called from being twelve finger breadths long;—**JEJUNUM**, from being commonly found empty;—**ILEUM**, from being supported in part by the bones called ilia—these form the three first, or small guts.

The **DUODENUM** is wider than the others—as it receives all the mass expelled out of the stomach; which cannot be said of the other guts, some part thereof being reformed by the way, but chiefly on account of its having, for a great part of its length, from its origin, progressively, no external tough covering from the mesentery to limit its size; it is likewise redder and more fleshy than the jejunum and ileum, its muscular fibres being thicker and stronger. About its middle it receives the duct from the pancreas and liver, called pancreatic and biliary, which passing through its coat, obliquely open into it through one orifice; it makes several curvatures—the most considerable is that by which it ascends almost perpendicularly some way, soon after the two ducts open into its cavity, whereby the alimentary mass must needs be somewhat retarded in its passage through it; and the bile and pancreatic juice the more thoroughly mixed therewith, and with one another; in its beginning, its innermost coat is even, without wrinkles or furrows, such as are called *valvulæ conniventes*; but in its progress, and towards its terminations, it gets many such; which must further retard the progress of its contents; it is supplied with arteries chiefly from the same trunk that supplies the stomach, viz. the *cœliac*; some lacteals, though but few arise from it.

The **JEJUNUM**.—It is not easy to fix exactly the limits between the duodenum, nor ileum, and this gut: one way of distinguishing the jejunum from the ileum, and perhaps the best, is to call all that jejunum, whose circunvolutions are above the umbilicus, or navel; and whose cavities are remarkably furnished with rugæ or *valvulæ conniventes*; this will make it about a third shorter than the ileum; it is narrower than the duodenum; its muscular fibres are thinner and weaker; it has some clusters of glands, called Peyer's, from their discoverer, and sends forth numerous lacteals.

The **ILEUM** makes its windings chiefly below the umbilicus;
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the lateral foldings are supported by the ossa ilia. above the thigh bones ; its structure is much the same with that of the jejunum, except that in it the valvulae conniventes decrease gradually, both in number and size, till at length they disappear. It hath more of Peyer's glands than the two former, especially about its termination, and sends forth extremely numerous lacteal vessels, the jejunum and it furnishing almost the whole of these canals : it is considerably longer than the jejunum, and is continued to the first of the thick guts called colon. Both the jejunum and ileum are furnished with blood vessels from the mesenterica superior. These small guts are the instruments immediately employed in making the chyle ; whose coats are pretty much the same with those of the stomach.

The thick or large guts are also three in number—the CÆCUM, COLON, and RECTUM.

The ileum, the last of the small guts, terminating near the right kidney, opens into the colon ; at its junction with the CÆCUM : this is a short wide sac about three inches long ; its diameter about thrice as large as that of the small intestines ; it is situated under the right kidney, and hid by the last convolution of the ileum, and has an appendix arising laterally from its bottom, called appendicula vermiformis, and is about the same length, but very slender, its diameter commonly not exceeding a quarter of an inch ; its termination is shut, and it fluctuates loose.

The COLON from its origin makes a large turn upwards as far as the liver ; then proceeds transversely to the left under the gall-bladder, which it touches under the bottom of the stomach, towards the spleen and left kidney, to which it is fastened ; from thence passing, it makes several turns, the whole of them pretty much in the figure of a capital S inverted, then terminates in the rectum ; so that it surrounds, in a manner, the whole abdomen, sometimes ascending, sometimes descending ; hence it happens that one stool is often succeeded by a second : by this contrivance likewise the fæces are longer kept, and hindered from being every now and then indecently voided.

The RECTUM or STRAIGHT GUT, so called because its course, if the length of the body is regarded, is straight, though it is bent backwards and forwards, humouring the direction of the os sacrum and os coccygis, bones situated at the lower part of the back, begins where the last curvatures of the colon end, and is terminated at the anus.

It is worthy to be observed, that there is a remarkable contrivance at the junction of the ileum with the colon and cæcum, by which the contents of the small intestines are allowed a free passage into the thick ones, but small regress or retropulsion from

the latter into the former is effectually hindered and stopped; this is called, *valvuli Bauhini—Tulpii, or—Coli*. Its effect in the animal œconomy is very salutary; for as the contents of the intestines begin to putrify, and become fœtid in the cœcum, by their being retarded there, both upon account of its capaciousness, and the almost perpendicular ascent of the colon, which is continued from it, if their repulsion into the ileum was not effectually hindered, the chyle in the small guts would be tainted with putridity, and even excrementitious matter thrown up at the mouth in obstinate costiveness; whereas not so much as a fœcal halitus, or the subtlest effluvia, can get that way in a state of health, though stools should be wanting ten or twelve days together, as happens in a common way to many.

The cœcum being much wider than the small intestines, and at the same time lower than the implantation of the ileum, the contents must, in some measure, stagnate there, especially as the colon from its origin mounts in a manner perpendicularly as far as the liver in the right hypochondre. By stagnating in so warm a place, their putridity increases there, and they acquire a fœcal odour, which is not observed in the contents of the small guts; they likewise become less fluid, and more consistent, by the resorption of the more liquid parts through the lacteals and other bibulous veins, still continuing.

The vermicular appendix of the cœcum, by the numerous glandular outlets in its cavity, serves, as well as a receptacle for the meconium in the fœtus, to lubricate the contents and membranes of the cœcum, into which it opens, as well as its own, in order to facilitate the propulsion of the fœcal matter, and prevent its adhesion to the coats of the cœcum and its own, and where it must stagnate longer than it had stagnated hitherto any where in the intestinal tract. This use likewise takes place in the born anima; and besides in obstinate costiveness, by affording more room or stowage for the congested fœces, it renders that complaint more easy to be borne, and less detrimental than it otherwise might be.

The cœcum and colon, besides having a stronger muscular coat than the small intestines, are furnished with three ligament-like bands, running length-ways on their outside, dividing their surface into three portions, nearly equal. Though they appear like Ligaments externally, they are made up in their inner structure of true muscular fibres, and strengthen the longitudinal fibres of the muscular coat; as they are longer than the proper coats, they keep them drawn up into folds or wrinkles.

Through these intestines is propelled and urged on the remainder of the alimentary mass, after having undergone the action of
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the small guts : it consists of the earthy part of the materials taken in for food—of the membranous, fibrous, cartilaginous, and bony parts, that could not be sufficiently broken, and comminuted by the stomach or intestines so as to be taken up by the lacteal, and other absorbing vessels ; the recrements of the bile, and mucus furnished by Peyer's glands, all mixed together.

The causes of its propulsion are the same as in the small guts, viz. the action of respiration, and the peristaltic motion of the intestines themselves ; but its course is slower than in the small guts, upon the account of its thicker consistence, the ascent and windings of the colon, the delay it meets with from furrows within the tube, and the great stop from hard fæces, pent up in the rectum by the sphincter ani. The putridity is increased as it goes on ; and as putrefaction generates air, the colon is commonly found distended with flatulency. The whole is more and more gradually exhausted and robbed of its most fluid parts ; and as what putrid miasmata are absorbed by the mesocolic veins, are determined finally into the vena portarum, to contribute towards the rancidity and putrescent disposition of the bile, so that even here the fæces, which are upon the point of being expelled out of the body altogether, are rendered useful and made subservient to the perfection of what is left behind.

The RECTUM begins in the pelvis where the last curvatures of the colon end ; its muscular coat is much stronger than in the other intestines ; the ligament-like bands, which in the cæcum and colon are collected into three portions, are spread equally over its surface, that no part of it may be weaker than another, lest it should give way in the effort of throwing out its contents. Into this intestine the fæcal matter, now consistent and shaped by the cylindrical cavity of the colon, especially in its last curvatures, where it is more uniform, and not so much distended by flatulency, is received and accumulated therein, until, by its increased bulk, weight, and acrimony, it becomes troublesome, and would prove hurtful if long retained. Then it is expelled by the muscular powers furnished for that purpose—and strong powers there are, and admirably fitted to answer their end.

The INTESTINES are not left to move at random in the cavity of the abdomen, but artfully tied down by a membranous web, which prevents their circumvolutions from being entangled in each other—at the same time allowing them a gentle but limited motion. That part of it, which is connected with the small intestines, is called mesentery ; the other part fastened to the colon, meso-colon. The rectum has a particular membrane allotted to itself for fixing it.

This membranous web, for the mesentery, and meso-colon
are

are one continued membrane, is a double production of the peritoneum, arising from the vertebræ of the loins; its two laminæ are joined together by a cellular texture, in which the lacteals, blood vessels, &c. run, and the mesenteric glands are placed: when this double membrane hath arrived at the intestines, its laminæ separate and quite surround them, thus furnishing their external covering.

Upon a slight survey of the uses produced by the mechanism of this part of the human machine, we cannot avoid being struck with wonder at its apparent simplicity, answering so many salutary purposes. If we trace the materials thrown into the stomach for our support through the intestinal tube, we must more and more admire the excellency of the divine workmanship; for as soon as we take our food it is received into a place, in all points calculated to render it fit for yielding its nutritious contents, by mixing with the salivary and gastric juices—having its texture broken by muscular action, not only of its own coats but the organs of respiration, and the quickly repeated shocks of the largest artery in the human machine, and from heat, increased from its situation, soon thrown into the process of fermentation—by all which it is rendered fluxile, and passes, from the contrivance at the lower orifice of the stomach, slowly into the head of the first of the intestines—more capacious than its inferior part; it is there mixed with the bile, increased in its quantity in proportion only as it is wanted, by the very means of those things which require it, and pancreatic juice, calculated to convert the various portions into a nutritious fluid, by mixing the parts uniformly together, at the same time affording a stimulus to promote the propulsive force of the intestines, and consequently increase the action of those vessels implanted in the sides of them to convey it through the mesenteric glands, where it receives more liquid, thinner than itself, to increase its fluxility into the receptacle appropriated for this purpose, and from thence into the blood—the saculent, or thicker part, being at the same time pushed forwards into the larger bowels, from whence there can happen no regurgitation of any, even of its finer parts, tho' delayed for some time, in order that a portion of its alkalescent or stimulating materials may be carried through the vena portarum, into the liver, to increase the acrimony of the bile; and as here the fæces acquire a greater hardness, consequently stand in need of a greater force to propel them forwards for their exit, the bowels in this place are possessed of greater strength, and require a stronger stimulus to excite them to more powerful action, which the putrescent state of the fæces, acquired by delay, affords.

But

But besides the uses, herein specified, appropriated to the stomach and intestines, there is another very considerable one bestowed on them, particularly the former, by which very material affections are diffused to almost every part of the machine, and from which all the sensible parts of the body receive very peculiar and extraordinary advantages—I mean that of conveying action to different parts, and feeling the effects from these sympathetically and instantaneously;—for in many cases the stomach not only will experience perceptible effects locally of things received into its cavity, but communicate effect to different parts from that local action; nay, will produce them sometimes without the animal being sensible of any action going forwards in that organ; and will itself be affected by some causes acting on other different parts, with the same unconsciousness of the locality of action, as well as sensible perception of such action—so close an union is there between this organ, and the intestines, with various parts, the most distant as well as the more contiguous.

Opium, the active preparations of antimony, bark, and a number of those medicines called cordial and antispasmodic, will diffuse their effects to the machine in general, and some particular parts, from what they exercise on the stomach, particularly itself. Hence will opium produce sleep—take off pain—promote perspiration or sweat—stop evacuations—alleviate and conquer some convulsive or spasmodic affections.—Antimonials take off cuticular spasms, productive of febrile affections, allay febrile heat—promote insensible perspiration and sweat.—Bark increase the tone and strength of the systems—stop some evacuations—increase others—and give firmness to the muscular fibres.

Cordials invigorate the habit—increase the circulatory powers of the constitution—subdue lowness—fainting—warm the habit—and produce discharges from the skin.

Musk, asafoetida, camphor—take off several convulsion affections—and all these things are done by the stomach, diffusively communicating effects to the various parts, whose office it is to perform their different operations, or to those where these morbid effects may be manifested.

And it will also be affected by the sensations induced on different parts distant from itself. Spasmodic affections of the pores of the skin will produce sickness, nausea, vomiting—so will a stone in the kidney; violent blows on the head, or congestions on the brain, will occasion similar effects—and a variety of others might be adduced tending to prove the same points; but enough has been here advanced to prepare us for the fuller discussion, and better understanding of these consequential particulars, when we come to speak more fully on them, as they occur repeatedly in the

the course of the subsequent sheets.—We must now avert to the kidneys.

The KIDNEYS are two pretty solid glandular bodies, situated in the posterior part of the cavity of the abdomen, on each side of the vertebræ of the loins, between the last false rib, and the ossa iliaca or hip bones. The right kidney lies under the great lobe of the liver, the left under the spleen, and therefore is higher; they are commonly about five inches long, about three broad, and one and a half thick; they are connected with the colon, duodenum, liver, and spleen, by the productions of the peritoneum. They are in shape not unlike a large bean, their circumference being convex on one side, and concave on the other—the concave side is turned towards the vertebræ, or back bone.

The kidneys are surrounded with a loose cellular texture, in which there is much fat; this likewise invests the arteries and veins of the kidneys. The proper coat or membrane of the kidneys is double, being composed of two laminae, or layers---betwixt which there is a very fine cellular texture; the external laminae is very thin, and only surrounds the body of the kidney; the internal one penetrates every where by numerous elongations into the substance of the kidney, from which it cannot be separated without tearing. The substance of the kidneys is smooth; even, and uniform in adults---in young children divided in a manner into several lobes and tubercles, or portions.

They are supplied with very large blood vessels---commonly called emulgents. The arteries arise from the great descending artery of the heart, nearly at right angles, one large trunk for each kidney; they run horizontally to the kidneys, and commonly without division---and having sent off branches to the external surface of the kidney, the chief trunk enters into its body at its concave part, and is distributed by an infinite number of small branches over all its substance. The veins running along with the arteries open in a large trunk from each kidney into the cava descendens, or large descending vein, near that part of the aorta where the arteries arise.

If the kidney is cut through its convex, towards its concave part, into two equal portions, there appears a three-fold substance composing its body---the exterior part called cortical, round the whole circumference of the kidney, of a bright, whitish, grey colour;---a middle substance, called medullary, striated, or streaked, which terminates in the third, called papillary, as it ends in eleven or twelve papillæ, or nipples, from the ends of which the urine drops through several small holes in the cavity of the kidney.

The intimate structure of the kidney is entirely vascular---the
small

small arterial branches proceeding towards the papillæ are reflected back with serpentine circumvolutions towards the surface of the kidney, then are bent again towards the papillæ; and, at length, send off straight urinary ducts perforating the papillæ, and tending to the cavity of the kidney called pelvis, which is continued to the ureter, a vessel which runs into the bladder.

The pelvis, which is truly the head of the ureter, is the reservoir into which the urine drops from all the urinary ducts or tubuli. It is formed by the confluence of three large urinary canals, into which the small urinary ducts open by holes laterally. This cavity, or pelvis, is straitened at length into the ureter, one to each kidney; so that the kidney may be imagined to be a vascular congeries, consisting of arteries, uriniferous ducts, or those which convey urine, and veins, all running together over the substance of the kidney; the urinary ducts opening at length into the great urinary reservoir, or pelvis, which terminates in the ureter. In the kidney there are no follicles between the last arterial branches, and the first urinary ducts.

By this apparatus is the urine separated in the substance of the kidney and sent into the ureter: the vast largeness of the emulgent arteries, and their proximity or nearness to the heart shew, that a great quantity of blood comes, in a small space of time, to the kidneys. Now the blood, which is newly come from the heart, must contain a great quantity of water; as, besides our drink, and the stomachic and intestinal juices, almost all the lymph of the body is poured upon the chyle, in its receptacle in the lower belly, and the duct in the thorax, immediately before it is mixed with the blood.

This water is impregnated with the salts of the blood, and some animal oil, attenuated by the process of concoction, or digestion, and circulation, and rendered miscible with water; and united with these salts, together with subtle terrestrious or earthy parts, abraded from the inside of the animal tubes, constitute the matter of urine. The diameters of the urinary ducts are adapted to admit these; and exclude, in a sound state, every thing grosser; as globules of blood, mere oil unattenuated, milk or chyle, and serum or lymph, that is concreasible by fire, urine being not so; at the same time they transmit every thing that is thinner, if it arrives at the kidneys; so that urine is the lixivium or ley, as it were, of the blood; by the separation of which it is edulcorated. Its salts and oils, which begin by repeated circulations to be more acrid than the tender vessels of the nerves and brain could bear, being washed off, and thrown out by the urinary passages.

The URETERS, arising from the pelvis of the kidneys, run
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down

down obliquely, and with a very small inflexion from the kidneys to the lateral parts of the inner and anterior side of the os sacrum, or lower part of the back, and passing between the rectum and bladder, are inverted in the latter. Their structure is much a-kin to that of the intestines, though the innermost coat is smooth and membranous, furnished with glands separating a mucilaginous liquor to defend it against the sharpness of the urine; they open into the neck of the bladder on each side, penetrating obliquely through its coats.

The **BLADDER** is a membranous and fleshy sac or bag, capable of contraction and dilatation, situated in the lower part of the abdomen or belly, immediately behind the joining of those bones, called ossa pubis—and opposite to the beginning of the rectum. The figure of it is nearly a short oval—it is broader on the fore and back, than on the lateral parts, rounder above than below, when contracted; and broader above than below when distended. It is conceived, as divided into the body, neck, and bottom, into anterior and posterior, and into two lateral parts, right and left.

The upper part is termed its bottom—its neck is part of its lower portion, with respect to its situation in the body. The bladder is not within the cavity of the peritoneum, that membrane only covering a part of its bottom or upper part, and coming down no farther anteriorly, but being reflected over the bladder, descends, covering it, as far down as the insertion of the ureters.

The structure of this organ is nearly the same with that of the ureters, viz. besides the peritoneum, which covers but part of it, there is first an external cellular, under that a muscular coat; then a second cellular, then a nervous coat, and the innermost of all, a coat, in some measure, villous, furnished with glands which separate a mucilaginous liquor, necessary to defend it against the sharpness of the urine, which stagnates within it often, for a very considerable time together.

The fibres in the muscular coat run in all manner of directions, the outermost, and most remarkable series is longitudinal, running from the neck upwards, and hath been thought to deserve a particular name—*detrusor urinæ*, expeller of urine—the others run obliquely, by different degrees of obliquity, and some altogether transverse. the neck, or under part of the bladder, is shut by a muscular sphincter, like that of the anus.

The use of the bladder is to receive the urine which keeps constantly flowing from the urinary ducts and kidneys into the pelvis and ureter—and to retain it, that it may not indecently dribble, and disturb the functions of life. It seems to change
its

its nature no otherwise than by its being kept at rest in a warm place, thereby becoming more acrid and stimulating. The urine is detained in the bladder by its sphincter, till by its distension, and the acrimony of the urine, either or both, we are made, uneasy and endeavour to expel it through the urethra—see page 53, 54, &c.—out of the body, which is done in the same manner as the fæces are thrust out—by the joint action of the diaphragm, and the muscles of the abdomen, assisted by the proper muscular coat of the bladder---and the pyramidal muscles, in a particular manner, favour the evacuation of the bladder, as they lie nearly over it.

The UTERUS, or WOMB, the habitation of the fœtus, is situated between the urinary bladder, which is placed before it, and the intestinum rectum placed behind it. In a grown woman, not with child, it is about three finger breadths long, two in breadth, where it is broadest, and one in thickness; it is of the figure of a flat flask, convex before and behind, with edges inclining to sharp; its broadest extremity, which is called its bottom, is uppermost; and its small part, called its cervix or neck, is downwards---it is covered over with a production of the peritoneum, two portions of which, one on each side, fasten it to the sides of the pelvis, and are called the ligamenta lata, or broad ligaments.

The womb, when impregnated, hath but a very small cavity, its walls being very thick; the cavity is, in some measure, of a triangular shape, and it is lined with a very thin small membrane.

The womb is made up of a compacted cellular substance, with a copious intermixture of blood vessels---there appears something like muscular fibres amidst the cellular substance, especially in women newly delivered, variously distributed in little circles.

The smaller and lower part of the womb, called its neck or cervix, abounds with callous rugæ, or folds; in the interstices or spaces of which there are mucous sinuses, and here and there round vesicles full of a pellucid lymph, where it opens into the vagina, described below; it forms a round protuberance, not unlike the glans penis, called the os uteri, mouth of the womb, or os tinæ, because supposed, like a tench's mouth, divided by a rimæ or chink; on which protuberance there is plenty of a mucous, glutinous liquor, furnished by numerous sinuses there: this glutinous liquor serves to shut the os uteri in pregnancy.

The VAGINA, or canal of the uterus, is about six or seven inches long; it is stretched from the mouth of the uterus to the pudendum, or external parts; it is of the same texture with the uterus; cellular, with numerous blood vessels interwoven: its inner surface hath several rugæ, or wrinkles; there are likewise

nervous papillæ spread over it, which render it more sensible; its external orifice is surrounded with muscular fibres, which constrict it.

The uterus, as hath been said, is plentifully stored with blood vessels; they are furnished from the hypogastrics, by which, likewise, the inner and greater part of the vagina is supplied; its outer extremity is furnished from the external hæmorrhoidal.

The womb is adapted for the retention of the embryo, and its nourishment, till the time of birth; and with the vessels of the vagina, for affording the monthly evacuation called menses, or catamenia.

But to the womb, for the purpose of promoting the generation of the human species, there are united two other contrivances on each side, the one called tubæ Fallopiæ, Fallopian tubes, from the discoverer, Fallopius; the other, ovaria, from their retaining small round substances of the nature of eggs.

On each side of the fundus uteri the former open by two small orifices; which in a dead subject, with difficulty admit a hog's bristle; from this small opening each tube proceeds somewhat transversely from the fundus towards the lateral parts of the pelvis, running between the duplicatures of the broad ligaments—their diameters gradually augmenting to their extremities, where they are about a quarter of an inch wide; they run not straight from the womb, but wind in such a manner as to turn their wide, open extremities towards the ovaria; these extremities are jagged or scollopped; their external membrane, or covering, is from the peritoneum; their proper coat is plentifully furnished with vessels; there are some obscure, seemingly muscular, fibres interspersed, supported by a spongy cellular texture.

The OVARIA are two whitish, oval, flat bodies, situated on the sides of the fundus uteri, to which they are joined by a kind of short ligament, and inclosed, together with the tubæ Fallopiæ, in the duplicature of the broad ligament—their substance is cellular and close, without fat—in it there are found, even in the ovaria of virgins, little round vesicles, called ova, or eggs—of an uncertain number, commonly ten or twelve, full of a transparent coagulable fluid. These ova adhere closely to the texture of the ovaria.

The OVARIA and TUBÆ Fallopiæ, are supplied with blood-vessels from the spermatics, which have nearly the same origin in females as in males—viz. the arteries of the aorta, near the rise of the emulgents, and the veins from the vena cava, and emulgent vein; these inosculate with the vessels that go to the uterus.

These also are supposed to perform particular functions in the propa-

propagation and formation of our species---for the ovaria are squeezed by the edges of the tubes, disengage some of the ova, or eggs, which are impregnated, generally one, now and then two, three, or four, which are forced into the tubes and carried into the cavity of the uterus, where they fix themselves and are retained, and here the fœtus is nourished to the proper time for its birth, which happens almost always in the space of nine months.

We might now, according to what we first proposed respecting the nature of our subject, finish our anatomical account, as sufficient has been described to give a tolerable idea of constitutions in general; but as we also intend to shew the methods of preventing, or stopping the progress of particular complaints, local as well as general---we must, before we conclude, speak of the testes, urethra, and penis, the male parts of generation---as they are subject to some complaints which require early attention, by which several disagreeable consequences may be prevented.

The TESTES, or TESTICLES, with regard to their situation, are sufficiently known; they are defended from cold, and other injuries, by several membranes or coats.

The outer one is called the scrotum---which is made up of the epidermis, or scarf-skin;---the skin, and immediately under the latter, a thick cellular texture, closely adhering to it, but without muscular fibres: next under this is what they call *dartos*, from its drawing up the skin. This coat envelopes each testis singly; and by the junction of both together, where their sides are contiguous, make a partition or septum between the two testes: it is likewise wholly cellular, without muscular fibres, and without fat. Under the *dartos* is the cremaster muscle, so called from suspending the testicles; there is one to each, and arise from the tendon of the obliquus descendens, oblique descending muscle of the lower belly; yet some fibres from the obliquus ascendens, oblique ascending muscle, the embracing the body of testes all around, serve to raise it, and squeeze it in the act of generation. It is probable, that by the action of this muscle, that the scrotum is gathered up into rugæ by cold, as neither it, nor the *dartos*, are furnished with muscular fibres. Under this muscle is another coat of a loose cellular texture, called vaginalis, from forming, as it were, a kind of sheath to the testes, between which and the innermost coat of all is a loose space, in some measure like that between the heart and pericardium, where a watery humour is contained---the last and innermost coat is called, from its whiteness, the albuginea; it is a thick, close, strong membrane, immediately contiguous to the kernel of the testes; the

the substance of which kernelly part is of a white colour, and from reason and analogy, it is concluded to be a continuation of the evanescent branches of the artery called spermatic, from its supplying blood to the testes, from whence the semen is secreted, rolled up together. It is divided into more than twenty portions or clusters, separated from one another by as many partitions, which are productions of the albuginea. Each cluster, contained between two partitions, terminates in one duct; which ducts, above twenty in number, meeting together, form a kind of network adhering to the albuginea; every duct anastomosing with those contiguous with it: from this duct arise ten or twelve other distinct ducts, which being separated, bent, or folded in a wonderful manner, make as many vascular cones, and by their uniting constitute the head or beginning of the epididymis, or small testicle. This single duct, variously bent and folded into serpentine windings, such as there is no instance of in any other part of the body, its windings being fastened together by cellular texture, makes a roundish body on the upper and posterior part of the testicle, called epididymis, which, at length, terminates in a firm and tough cylindrical tube, called vas deferens.

The PENIS consists of two bodies called corpora spongiosa, or cavernosa, spongy or cavernous bodies—part of the urethra, the glans or nut at its extremity, and its integuments. The integuments are, first the scarf-skin, and true skin—which being folded back, and adhering round the root of the glans, forms what is called the præpuce, in the inside of which there are small glandular folliculi, which separate an oily substance, serving to make the præpuce slip over the glans, and hinder them from growing together: this substance forms white flakes, and grows rancid and fœtid by long stagnation. In hot countries, it is more apt to corrupt and create inconveniences, than in temperate climates. This seems to have introduced circumcision, which was early practised all over the East, and made a part of the Jewish religion. It is performed by cutting off the præpuce quite round, close by the root of the glans.

Under this common integument, the penis hath a proper coat covering all its body, from the glans exclusive backwards, and is of a tough tendinous texture.

The TWO CORPORA SPONGIOSA arise from the os pubis on each side, and are continued to the root of the glans: they are so called, because they are porous like sponge, and capable of being enlarged by a fluid penetrating their substance, chiefly in the living, by blood—or in the dead subject, by mercury or inflation of air.

The URETHRA is a continuation of the neck of the bladder,
and

and runs in a furrow between the two corpora spongiosa to the extremity of the glans—it consists of two thick spongy membranes, with a spongy texture between them—its beginning is covered by glans called PROSTATÆ—at its emersion from which, it becomes thicker and wider for the length of an inch, which thick part is called its bulb, from the resemblance it bears to a bulbous root; its inner membranes are pierced with many holes, here and there, through which, from a glandular apparatus in the spongy substance of the urethra, a mucilaginous liquor is furnished, serving to defend it against the acrimony of the urine. Besides these orifices, there are three other glands, two near the bulb of the urethra, one on each side, about the size of a pea; each of which sends off a long duct which opens into the urethra, and a third single one, less than the other two, at its bend under the os pubis—which sends off two ducts opening likewise into that canal. The first two are often found, but sometimes wanting or very small; the third is but seldom met with—the orifices are called by some lacunæ; these glands—Cowper's glands; they both, probably, serve for the same purpose.

The GLANS is a continuation of the spongy substance of the urethra, reflected over its extremity, and expanded in the form we see: it is covered over with a thin epidermis or scarf-skin, under which there are numerous nervous papillæ, rendering it extremely sensible.

The penis is plentifully supplied with blood vessels from the iliacs, both external and internal—its nerves come from those of the loins and sacrum.

The use of the parts we have now described are for the propagation of our species, and some for the evacuation of urine.

We shall now conclude what we mean to advert to on the anatomical part of the machine, which we have rendered very easy to be conceived, and think will be highly useful in assisting the uninformed readers to have just conceptions of what we mean by particular constitutions in general,—what of general diseases, and those called topical, or confined to some particular part,—and make them perceive the reason why such and such particular remedies or regimen should be employed in such and such particular cases, as come within the reach of every man's power—whether they aim at preventing the accession, or shortening the progress when begun; all which will be much better, and easier understood, by the sketch, concise as it is, which has been given. For, certainly, laying down rules and directions for a man how to proceed *in nervous cases*, who has no idea of a nerve; *in inflammation*, who knows not any thing of the vascular system; *in jaundice*, *stone*, *gravel*, who is totally ignorant of the liver, spleen, bladder,

bladder; kidneys, is as bad as leading a man blindfold through a country to discover its beauties, and give him a knowledge of its situation; soil, produce, &c --- And to talk to a man of discovering the nature of his constitution, and directing him to proceed agreeable to its disposition; without telling first of what it is composed, and making him sensible of the natural action of its component parts, would be as vague and useless as chopping logic to a rustic---it might confound, but could not inform: and it is for want of true knowledge in these particulars, that men, in other respects sensible, are so often heard delivering a profusion of nonsense on medical subjects. We therefore, in order to correct errors so often detrimental in their consequences, have presumed to alter the general plan of publications of this sort, by thus beginning anatomically---and shall now proceed to shew the different constitutions---what they are, and how they may be discovered.

But, first, we must take notice of those parts which are called the moving powers, by which all constitutional action is promoted, and life preserved; and these are---the *brain and nerves*---the *heart, and vascular system*---the *lungs and blood*---and the *muscular fibres*.

Now in proportion to the different degrees of power which these possess in their natural state, so may constitutions in general be properly denominated.

The *brain and nerves* are considered as the origin of incitability---that is, motion produced in them by mental affections, and sympathy.

The *heart, vascular system, and muscular fibres*, as the fountains of irritability---that is, motion produced by material stimulus.

The *lungs and blood*, the source from whence all animal heat is derived---the universal stimulant of the human machine.

The *muscles or muscular fibres*, as the instruments of motion.

The *stomach, intestines, and other viscera*, as parts which may themselves be acted upon, and produce action of some of the general moving powers, and each on parts distant from them.

But we must observe, that with respect to the term, irritability---it is by all authors equally applied to the nervous and vascular system, as well as muscular fibres, which we have shewn it necessary to alter, and confine it to the two last alone---because, independent of the nerves, they cannot be put into motion without some material stimulus locally applied to them---whilst the nerves may be brought into action by affections purely mental---the precise nature of whose action we cannot describe, and know them not but by effects. Besides, though they are in the habit

united

united closely, they may exist independent of each other, and may be separately affected---shewing those affections belonging to themselves, without disturbing each other in many cases.

It was, therefore, unavoidable to separate the two---that constitutions might be precisely and distinctively marked, where the action of one or the other were most prevalent, and hence great confusion prevented: add to this, it empowers us to account more rationally for sympathetic affections, that is, where parts distant from others, shew manifest signs of affection, though the cause producing them lies in some more distant part; or where affections are suddenly produced in the habit, from some external appearances out of the habit, no matter being at that time inherent that occasions these affections from the locality of irritation. But we must allow also, that the nerves are capable of being put into motion by material stimulus.

Hence then it is clear---that

The nerves are capable of being brought into action by mental affections, sympathy, and material stimulus, themselves abstractedly considered.

The vascular system, and muscular fibres, under the same consideration, only by material stimulus.

That in their combined state, they mutually act on each other, in many cases, or may be separately affected.

Now as the moving powers vary in their different degrees, and different combinations respecting those degrees, so do we conclude constitutions ought to be determined---and so ought different regimen, and applications of medicine, be advised---for preserving health, preventing, retarding the progress, and curing of diseases.



SECTION II.

On CONSTITUTIONS.

THERE is no subject on which we hear valetudinarians so much converse, as the particular nature of their constitutions; nor any on which they form such a variety of conjectures, at the same time to speak so positively, as if they understood what was meant by the term; nay, even are angry if you dispute their want of the most minute knowledge in this respect; and, indeed, it is almost held as an undoubted truth, that all men are the best judges of their own constitutions.

Notwithstanding, I can by no means allow this to be a truth, yet I can very readily conceive how they make the mistake, and on what it is that they build such a conceit---they mean, that all

men can tell what things best agree with them, which commonly occur, and which they have observed from repeated experiments; but this only comprehends the effect produced by different causes, and may assist in giving information to scientific men in investigating the precise nature of particular constitutions; but never can lead men, who have not made the medical art their study, to sufficient discoveries, for understanding the subject properly; a subject which cannot be scrutinized too closely as perhaps the whole good to be derived from judicious assistance upon that knowledge totally depends. We shall, therefore, go a little deeper into this matter, in order to lay a foundation for the application of those remedies, from whence every man may derive benefit, with some degree of certainty, and after which all naturally thirst with the greatest avidity. But to make this business easy, we shall confine ourselves to the terms of which people in general make use, and endeavour to shew, what ought to be understood by them, applied to the varieties presenting themselves in different shapes in the human machine.

Mankind in general have furnished a great number of constitutions---under the following appellations:

- | | |
|----------------------------|-----------------------|
| 1. Strong robust | 10. Scorbutic |
| 2. Weak, relaxed, delicate | 11. Gouty |
| 3. Nervous | 12. Rheumatic |
| 4. Irritable | 13. Scrophulous |
| 5. Torpid | 14. Flatulent |
| 6. Costive | 15. Phthoric, or full |
| 7. Lax | 16. Hot |
| 8. Bilious | 17. Cold |
| 9. Plegmatic | 18. Consumptive. |

And these have been deduced from the different appearances of the constitution---the various effects to which they were prone; the humours considered as inherent; and to the affections of particular parts, which they constantly, or on slight occasions, experienced. But before any benefit can accrue in the application of remedies, or the manner pointed out by which mischief may be avoided from the same source, we should be acquainted with the supposed constitution and nature of their powers, which is the first and most essential disposition; and it is for want of this knowledge, that self-created physicians, *doctors of imagination*, occasion many violent symptoms of evils to their credulous patients, who are hurried into morbid circumstances---prescribing remedies, the more applicable to constitutions diametrically opposite to the nature, and which require very different materials to correct the same complaint. For want of this knowledge, Pleurisy has been converted into pulmonary consumptions, and that

that not unfrequently ; *gout into apoplexy ; colds, inducing slight febrile affections, into inflammatory fevers ; sore throats, easily curable at first, made dangerous, and too often fatal*---and many other deleterious transitions occur from the same fountain---for it is a certain fact, there is not any man that does not fancy himself, in several cases, a physician ; and when, by his ignorance in advising improper remedies, he has created mischief, perhaps death, he consoles himself, and the unhappy friends, by saying, he did it for the best.

To guard, therefore, against the unfortunate consequences of these *good actions*, our duty calls upon us to specify the particular nature of these constitutions, that we may hereafter, when requisite, point out properly adapted remedies, that the patients may not fail in the attempt to alleviate, or cure, or prevent particular complaints.

In STRONG, ROBUST CONSTITUTIONS,

The muscular stamina are firm, and well compacted ; powerful and agile in motion ; the pulse strong and full ; the nerves equable and forcible in their influence ; the circulation of the blood free, and the texture of that fluid possessed of great tenacity ; the complexion healthful, and the whole habit in a state of strong activity.

In WEAK, RELAXED, and DELICATE,

The reverse of these occur---the muscular stamina are weak and loose, imbecile in motion, and soon wearied ; the pulse small and quick ; the nerves irregular and debilitated in their influence ; the circulation of the blood languid, its texture loose ; the complexion pale or sallow ; and the whole habit in a state of debility.

In the NERVOUS---the constitution is like the latter in a great degree, but the nerves are easily incitable from slight causes, creating spasmodic affections in different parts. People of this constitution are generally timid---have great variability of spirits, and much subject to hysteric fits, cramps, and flying pains,---putting on the appearance of various complaints, according to the parts affected ; the urine is commonly pale, sometimes made in small quantities, then becomes turbid---or in large quantities, then remains limpid. In these, therefore, the nervous system is in such a state, so as to be quickly incitable, and readily and frequently thrown into morbid action.

In the IRRITABLE,

There is a strong propensity in the vascular system, and muscular fibres, to be thrown into quick states of contraction---the
confli-

constitution being in an intermediate state, between the robust and relaxed, and participating, in some degree, of the nervous. These are subject to have the circulation of the blood readily increased---flushings in the face---are irascible, and easily moved to anger---they are soon heated by any stimulant taken internally.

Opposite to this constitution is the

TORPID.---In these the circulation of the blood is languid, seems rather to creep, or undulate, than circulate; the extremities are generally cold, and they feel, without any cause very often, internal oppression; dreading, and fearful of imaginary calamities---they are naturally inactive, and indolent, unless roused by some pleasurable pursuit; irresolute, mutable, and very often timid in the extreme, where any difficulties are to be surmounted, and the habit is generally costive.

The PHLEGMATIC.

In these the lungs, stomach, and intestines, are apt to be loaded with too great a quantity of viscid phlegm---from the digestive organs being in too weak a state, and wanting a due secretion of bile---the habit costive---in general cold---subject to chronic coughs, and expectoration of tough viscid phlegm---the circulation of the blood sluggish---the breathing laborious---the muscular fibres and vascular system torpid---though corpulent, they very often are gross, and frequently subject to œdematous, or palsy swelling of the legs.

The PLETHORIC.

These are such whose constitutions is apt to breed a great quantity of blood, and are chiefly of the irritable class, more inclining to the robust and athletic. In these the digestive powers are good---the appetite sometimes voracious, sometimes moderate---frequently hæmorrhages occur, and very often copious evacuations of different sorts---also head-aches of the dull, heavy kind, attended with frequent giddiness---they are liable to become often drowsy and sleepy, and fond of that species of indulgence---and these generally arise from too great plenitude in the sanguinary system.

The BILIOUS.

Are such as have a very copious secretion of bile, which is apt to collect in its repository the gall-bladder, nor be regularly excreted, or pass into the duodenum, or first intestine---by which means, stagnating there too long, perhaps from its viscosity, it acquires a degree of acrimony, which, when poured into the intestines, occasion bilious colic, cholera morbus, or a vomiting up
and

and purging of bile---bilious looseness. In these, the complexion has generally a fallowish cast ; they complain frequently of bitterish taste in the mouth---are commonly costive, and have deep-coloured urine often, depositing a yellow sediment ; their appetite is very variable, and their digestion, for the most part, weak.

The COSTIVE.

In these constitutions, some of them are naturally so inclined--but if not, it depends on particular states of the intestines, abdominal muscles, and the different viscera that pour forth their contents into the bowels ; in these cases, the intestines are either in a state of too great torpidity, or there is a deficiency of the internal fluid---pancreatic juice---or bile, which last may be too inert---or the abdominal muscles may be too relaxed---which occurs sometimes in women who have had several children.

The contrary of which happens in

The LAX ;

for in them the intestines may be in too irritable a state---slightly moved, or may be too slippery, from an increased discharge of the pancreatic and intestinal glands---or the bile may be too acrimonious---or acrid humors may be too constantly poured into the intestines, and stimulate them to too strong and quick repeated action.

The FLATULENT

Are such as have too great a quantity of wind, or air, in the habit, in a loose unfixed state---particularly in the stomach and bowels, which is discoverable very often by flying, wandering pains, increased on warmth by its rarefaction---by distension of the stomach and intestines---a rumbling noise in the bowels---emissions of wind upwards and downwards---and these may occur from a weak digestion---allowing particular materials to emit their air, and the juices formed from them incapable of re-absorption---from their not being properly elaborated in the first passages ; from being also too tight laced, women often induce this complaint---and by the too common and frequent use of warm glysters---by a relaxed state of the stomach and intestines---and by feeding constantly on flatulent food, and keeping long fasts.

The SCORBUTIC.

Such are indiscriminately so stiled, who have the appearances of eruptions on the surface of the skin of different kinds---red pustulous pimples, nettle-rash, or dry scurfy scales---these truly indicate a prevalent acrimony in the habit of some sort ; but the true scorbutic

scorbutic constitution is known by other marks—black, or livid, or yellow spots, on the surface of the skin—tender gums.—bleeding on the slightest touch—sallow complexion—rank fetid sweats—loose texture of the fleshy parts appearing puffy and flabby---and this owes its origin to the texture of the blood being in a broken or very loose state—whilst the former depends more upon acrid humors in the habit---obstructed, or rather diminished, perspiration---weak digestive powers, and feeding on unwholesome food, or eating and drinking too freely and luxuriously.---These, therefore, are better divided into acrimonious and scorbutic---the first where the acrimony of the fluids is indefinite and cannot be ranged under any known species.

The GOUTY

Are such as are troubled with flying pains, occupying chiefly the small joints of the hands and feet---and having regular fits of that disease---being subject frequently to indigestion, and to be seized with pains of the joint of the great toe---or having pains of the stomach and kidneys, alternating with those of the hands and the feet---subject, from the same cause, to be teased with pains in various parts before the fit of the gout has become regular, or has retroceded, or is misplaced, owing often to debility of the active powers of the constitution---particularly the stomach and vascular system.

The RHEUMATIC.

These are such constitutions as are replete with rheumatic acrimony, which fixes itself in different parts of the machine, chiefly on the large joints, and runs along the course of the muscles---or fixes itself also on the membranes of the muscles, sometimes affecting one, sometimes another---and flies constantly from place to place, assuming different appearances according to the peculiarity of the habit in which it resides---becoming in some acute and inflammatory, particularly in the robust and athletic, who have strong stamina, and are readily irritable---in others, painful and chronic---in such whose constitutions are more debilitated or torpid.

The SCHROPHULOUS.

Are such, in which that taint called scrophula, or King's evil is inherent, manifesting itself by glandular tumors, chiefly of an indolent kind, in the neck, for the most part, but also in other places of the body, where the lymphatic glands are dispersed, particularly in the lungs and mesentery---attacking the fair complexioned and delicate most commonly---shewing itself also by an enlargement of the upper lip and *alæ nasi*, or sides of the nostrils---and swelling of the belly---a preternatural slight heat generally

nerally attending the whole habit---and febrile affections---and sometimes a short tickling cough.

The HOT and COLD

Depend upon the quantity of blood, in an healthful state and different degrees of vascular action---if the habit is full, and the vessels are in a state of irritability, the constitution will be of the former class---if there is a paucity of that fluid, or no redundancy, and the vascular system is in torpid state, whereby circulation is not duly performed, it will be of the latter---for where the blood is most superabundant, and irritability of the vascular system great in degree there will always be the most heat, and vice versa.

The CONSUMPTIVE.

These are generally such whose texture of solids are very delicate---the vascular system irritable, and some degree of acrimony in the humors---pale complexioned---narrow chested---long necked---subject to febrile heats, imitating hectic---easily thrown into pulmonic hæmorrhages---and frequently affected with slight tickling coughs---their teeth clear, with an appearance like transparency---their eyes often bright, sometimes towards evening languid---the ends of the fingers rather bulbous---and the nails curved inwards, particularly when they approach near a morbid state.

We have here attempted to point out what is to be understood by the terms commonly made use of in applying them to particular constitutions; but we find that some have allusion to, and involve general ideas---whilst others are only confined to single or particular ones, and of which no use can be made, whilst in such a vague, and unsettled state---for in order to be of service, either in our preventive or curative plan, we must advert to those particulars which form constitutions in general---for it is, by the regulating of them we must administer relief, when afflicted with diseases to which they are prone---and prevent those whose seeds are disseminated through the habit from becoming active, and by that means constituting complaints to which they are specifically adapted---we, therefore, form constitutions into separate divisions---such as are *simple and general*---*mixed and general*---and such as are *peculiar*.

SIMPLE, and GENERAL are,

1. Strong and robust.
2. Nervous.
3. Irritable.

4. Torpid

4. Torpid.

5. Weak, relaxed, and delicate.

But these may be combined---and form others;
As STRONG---ROBUST---and *Irritable*,

Torpid,

Nervous;

Though the first of these is what most commonly takes place.

The WEAK, DELICATE, and RELAXED---may also be
subject to the same combinations---

Nervous,

Irritable;

Torpid,

Apt to take place in the order here set down---with regard to the
most general mode.

The MIXED and GENERAL---are

1. Plethoric.

2. Hot.

3. Cold.

4. Consumptive;

5. Acrimonious.

For these may be combined with any of the former---but depend
upon the quantity and quality of the blood---and the greater or
less degree of the irritability, or incitability of the vascular or
the nervous system.

The PECULIAR are;

The 1. Lax.

2. Costive.

3. Bilious.

4. Phlegmatic.

5. Scorbatic.

6. Gouty.

7. Rheumatic.

8. Scrophulous.

And 9. Flatulent.

Any of which may be combined with those which are simple and
mixed—as a constitution may be

Strong, robust, plethoric, hot, costive, gouty---so may the
weak, relaxed, and delicate---though plethora is most generally
the concomitant of the former.

It will be unnecessary to form any other combinations in this
place, as the reader will very readily conceive them himself;
we shall only, therefore, observe, that there are some which can
never exist in a combined state, viz.

The

The strong and robust, with the weak, relaxed, and delicate---the hot and cold---the irritable and torpid---the lax and costive.

Now as there is certainly such a diversity of constitutions, many of them diametrically opposite to each other; and as there is also a variety of accidents and diseases which will affect the different constitutions in similar modes, how can it happen that one and the same application shall be proper to all? For it is owing to the operations of the habit that diseases are prevented—made milder, or cured; and it is to our applications, that these salutary operations are often brought about where nature is defective—and, consequently, obliged to our assistance. We must, therefore, select our remedies, and appropriate them to the particular constitutions; and let our directions be formed, with respect to diet and conduct, consistent with the same constitutional points—and more especially where our attempts are levelled at the prevention of morbid attacks; in completing of which we are to aim at keeping the constitution in a state of health, adequate to the powers with which it was originally endowed; so that the common causes of diseases may not be enabled to produce their effects; which originate from different qualities and changes of the air; called constitutions, climate, morbid effluvia, and intemperance or indiscretion; under which last we comprehend all those actions which, in their regulations, depend upon our own power, or are deduced from necessity.

Or, that such diseases, as are unavoidable, may be made to produce their influence on the machine in the most mild and gentle state; such as, small pox, measles, and various fevers, and other complaints of the infectious or contagious class; or those which arise from an hereditary cause: in accomplishing which purpose, it will chiefly depend upon the proper use and application of what are called the NON-NATURALS; which, before we can be enabled to give proper directions in these points, we must examine, and shew the peculiar influences they are capable of producing in the habit.



S E C T I O N III.

OF THE NON-NATURALS.

THE celebrated HOFFMAN, to whose labours the art of physic is much indebted for its improvement, says, "A
I
" physician

“ physician assisting in the curative operation of nature, should
 “ use the milder and simple diætetic remedies, rather than those
 “ which are very active, and compounded of the pharmaceutic
 “ class. By diætetic is to be understood, those materials which
 “ are taken from such things, as every body requires for the
 “ preservation of health and life, and which are received in the
 “ schools, under the denomination of non-naturals; for, inas-
 “ much, as from a wrong or inordinate use of these, the first
 “ foundations and proximate origin of diseases arise, and also
 “ have their violence increased; so nothing is better adapted to
 “ expel or subdue morbid affections of various kinds, than a
 “ proper use of them, with a regular mode of living, for without
 “ that, nature can do no good in healing, nor medicine produce
 “ its desired effect. Whence the truth of GALEN’s assertion,
 “ That medicine has no efficacious remedy which can bring
 “ any permanent assistance, if the mode of living should resist it,
 “ or should not act in conformity, and become an useful auxili-
 “ ary.” And he solemnly asserts, “ That by diætetic remedies,
 “ (in which change of air and climate, proper exercise, well
 “ adapted meat and drink, also a prudent use of whey and mi-
 “ neral waters, with abstinence and ease are to be included,) he
 “ has performed such things in conquering obstinate chronic
 “ diseases, which chiefly had their long and fixed seat in the
 “ weakened system of the nerves, as spasmodic, convulsive,
 “ hypochondriac, and hysterical affections, which others had in-
 “ vain tried to accomplish by medicines elegantly compounded,
 “ and judiciously administered, and he himself had expected
 “ from medicines of great fame.”

And certainly the doctrine is perfectly true—medicine can do very little in a variety of cases, without a strict adherence to a well-adapted regimen—and in preventing the machine from being afflicted with a diversity of maladies, nothing. The failure of all the arcana, spoken so highly of by a number of the ancients, as to be called panaceas—nay, the hands of Gods—indeed, those supported by names of no less consequence than FRIAR BACON, and LORD VERULAM, have proved how little dependence can be placed on the most extolled nostrums—whilst Carnaro, and several others of more modern date, have experimentally and incontestably proved what may be done in these points by a proper regimen, selected with judgment, and persevered in with resolution—not only curing different obstinate diseases, which had resisted the force of the art of medicine, in the hands of the most well-informed and sagacious practitioners, but insuring a continuance of health in a green old age. For Carnaro says, “ At eighty-three I now enjoy a vigorous state
 “ of

“ of body and mind---I mount my horse from the level ground---
 “ I climb steep ascents with ease ; and have lately wrote a co-
 “ medy full of innocent mirth and raillery ; when I return home,
 “ either from private business or the Senate, I have eleven grand
 “ children, with whose education, amusement, and songs, I am
 “ greatly delighted ; and I frequently sing with them, for my
 “ voice is clearer and stronger now, than ever it was in my
 “ youth. In short, I am in all respects happy, and quite a stran-
 “ ger to the doleful, morose, dying life, of lame, deaf, and
 “ blind old age---worn out with intemperance.”

Great as are these advantages---how happy should it make us in our reflection, and how thankful to the benevolence of Providence ought we to be, that these, in a great measure, lay within our reach ; for enviable as are the blessings CORNARO enjoyed, he emerged from a state of constant torment, by a steady adherence to, and uniform perseverance in temperance, appropriating his regimen to the nature and exigencies of his *constitution only*---which is extremely worthy of imitation, as its consequences will amply reward for any mortifications we may have to encounter in the beginning. In order to qualify ourselves for which, we must proceed to enquire into those sources from whence he drew such consolation---and here we shall find, they all centered in the proper use OF THE NON-NATURALS---so called, because they affect man without entering into his composition, or constituting his nature---but yet are so necessary, that he cannot live without them---we should rather term them necessaries--as they are things natural in themselves, and to man's existence necessary, and unavoidable. However, as our business in this place is to give information on material things, we shall refrain from verbal investigation, as of little moment---and consider them in the following order---shewing their manifest qualities, and explaining their perceptible effects. They have been divided into six heads, viz.

1. Air.
2. Aliment.
3. Exercise and Rest.
4. Wakefulness and Sleep.
5. Repletion and Evacuation.
6. Passions, and Affections of the Mind.

But before we enter on a full discussion of these separately, we must observe, that the six might, with great propriety, be reduced to four---as exercise and rest produce pretty nearly similar effects on the constitution, as wakefulness and sleep---hence might these not improperly be reduced to one head, allowing

something more to exercise, than wakefulness, because of the muscular motion employed in the former.

As for repletion and evacuation, they, we shall find, more properly belong to the class of diseases, as these being too profuse or too sparing, constitute morbid affections of the habit.---However, we shall speak of each in their place, agreeable to their arrangement---and first of

AIR.---And here we mean not to enter into philosophical or chemical subtleties of the nature of this fluid, but confine ourselves to that of atmosphere, whose different states and changes produce perceptible effects on the constitution—and which all ages have considered as one of the occasional causes, and that very material, of health or diseases, according to its good or bad properties, affecting the body by inspiration, as well as its circumambieney. It is a fluid possessed of specific gravity, elasticity, and transparency, and compressible—it surrounds the earth, and when agitated, or driven in currents, forms wind: it is extremely subtle, penetrates, and mingles with every part of the body, and by its elastic property, gives an intestine motion to all the fluids, and a lively spring to all the fibres, which promote circulation: it is never absolutely pure, but always mixed with heterogeneous particles, and that air which we call pure, is such as is not overcharged with any steams.

It has its varieties, and differs with respect

1. To its weight or levity.
2. Heat or coldness.
3. Dryness or moisture.

And 4. Purity or impurity.

Now these properties of the air separately, or by their different combinations, produce many unpleasant effects on the constitution—give rise to and aggravate many symptoms in particular complaints—as well as are the origin of many diseases themselves.

1. For if the air is too heavy, it produces inflammatory affections of the membranes in the chest and lungs, called pleurisy and peripneumony, head-ach and giddiness, &c. by pressing upon the surface of the body—obstructing the pores of the skin, hence impeding perspiration—accelerating the motion of the blood—occasioning it to crowd on the internal parts, and there circulate too rapidly—hence it is impelled too forcibly upon the lungs, and too copiously upon the brain—impeding, indeed, the natural functions of these organs which lie remote from the surface of the machine.

2. If

2. If it has too much levity, its elasticity, is increased, and hence produces, by vascular distension retarding the circulation of the blood, and by diminishing the resistance of the fluids contained in the pulmonary vessels, discharges of blood from the lungs—hysteria, and hypochondriacal affections—rheumatism—gout, &c.
3. Should the air be too hot, by rarefying the humors, and weakening the fibres, it increases the circulation, and augments perspiration, in which it is greatly aided by its additional stimulus on the vascular system—whence acrimony is induced in the remaining fluids.

If too cold—local inflammations—as quinseys, pleurifies, peripneumonies, are brought on by over distending the lungs from its gravity—increasing the tone of the vessels by constricting their fibres—condensing or thickening the humors—and lessening perspiration. And should this state of the air suddenly succeed too long-continued heat—ardent, bilious, and other fevers are the consequence—by producing its effects on the constitution, where the blood is in too rarefied and acrimonious a state, and the humors participating of that acrimony with which the sanguinary mass is so replete.

4. Too dry an air shrivels up the solids, incrassates or thickens the fluids, and disposes to febrile affections—whilst too great moisture in that fluid, relaxes, and debilitates, lessens perspiration, renders the blood too watery—and by these means becomes extremely injurious, laying the foundation for coughs, asthma, dropsies, intermittent and nervous disorders.

From the combination of some of these different qualities of the air, different affections found their origins.—Coldness and moisture are offensive, we find, to the constitution—but heat, moisture, and levity, are more pernicious, because these, acting together, supply the habit with a putrescent tendency, from whence many of our most dangerous complaints arise, as vomiting and purging of acrid bile, called cholera, bilious looseness, malignant fore-throats, and putrid fevers.

5. The purity and impurity of the air depends upon the greater or smaller quantity of heterogeneous particles; these are particles which belong not to the air in its natural state, which float in it—hence it has, besides the above evident qualities, others which escape detection by the senses, though from their deleterious or mischievous effects, sufficiently manifest—such are from infections of various kinds—as small-pox, measles, scarlet fever, &c. malignant effluvia, exhalations, &c.

With regard, however, to the salubrity of the air, we must observe—that is most salutary, which is pure, dry, and temperate, untainted with noxious damps, or putrid effluvia, from any cause
what-

whatever : but the surest mark of good air in any place, is from the longevity of its inhabitants.

The evident marks of a bad, or insalubrious air in any house, are dampness, or discolouring of plaister or wainscoat ;—mouldiness of bread, wetness of sponge, melting of sugar, rusting of brass or iron, and rotting of furniture :—and nothing is more conducive to render air noxious, load it with putrid steams, and breed bad distempers, than permitting common and crowded burial places to be within the precinct, of populous cities ; or numbers of poor people living in uncleanness, collected together in small houses, or narrow streets.

Valetudinarians experience the most agreeable sensations when the wind is westerly, though when at north, or north east, it is accounted bracing and healthful. Indeed so powerful an effect has the influence of the winds, agreeable to the quarters in which they were fixed, been supposed to have, that it has been asserted, our dispositions and tempers are greatly affected by them ;—long continued easterly winds make people, who are naturally cheerful, very irritable and morose. Nor does our tempers being affected by the different states of air, seem at all improbable, inasmuch as the body and mind are linked together in such close and intimate bonds of union, that they reciprocally affect each other : for as corporeal affections will, we know, alter the natural dispositions of people—making the placid and sweet tempered, often petulant and peevish—the courageous, timid, fearful, and irresolute—the most patient, restless and unquiet—the lively and volatile, languid and desponding—and the most active, indolent ;—so may the air, as it conduces to throw the constitution into states nearly morbid, produce, in some degree, similar effects—as has been repeatedly experienced by men, not divested of observation.

A west wind, in general, is esteemed the most salutary—then a north-west—after which succeeded, in degrees of salubrity, in the following order—east, north-east, and last, south and south-east—and these may be accounted for, from the different qualities of the air, in proportion to the excess or deficiency of heat, coldness, moisture, dryness, weight, or levity—or the different noxious or contrary combinations they bring along with them.

From what has been advanced, the situation of our habitations will be a very material consideration, in conducing to the preservation of our health.

The most healthy exposure, we have been told, in any place fixed for residence, is to be found by cutting one of the trees near the place where the house is to be built, transversely with a saw, then closely to observe the rings which appear on the surface

face of the section ; the side of the tree on which the distance of the rings from each other is greatest, is the most healthful exposure. And this is obvious, because there has been the greatest accretion of matter by the healthful disposition of those parts so made, from always being blown upon by air from the most salubrious quarter, which it faces, and being hid from that which comes from the opposite, which seems to produce a different effect—and it is an admitted fact, that in all places, or parts of country, where vegetation is most vigorous, manifested by the strength and richness of the vegetable class ; there will also animals enjoy the same consequences—hence should the windows of the house, all other circumstances being the same have a similar aspect.

That house is considered as healthy which is situated on rising ground, or side of a hill, and gravelly soil, because it is less exposed to damps and stagnant waters, in an open dry country ; the rooms should not be small, but rather large—though not cold ; the exposure prudently adapted to the nature of the climate, but so contrived, that it may be persiated by the east and north winds, whenever you please, which should be at least once a day—to blow away animal steams, and other noxious vapours ;—but the air of the bed-chamber, *especially*, should be pure and untainted, not near the ground, or any kind of dampness. We may in general conclude, those situations are most salutary, where these different properties of the air commonly attend in degrees of mediocrity, steering in a medium between two extremes—nor will it be a small addition, if they are near a river or brook, whose stream is constantly running over a gravelly or sandy bottom—for standing water is always detrimental.

The country is more healthy than cities, or large towns, which are populous, from the greater purity of the air, if they are in similar situations ; but some countries are extremely unwholesome, from the noxious vapours with which the air is impregnated—as those near the marshes of Essex, fens of Cambridge-shire, or contiguous to lead mines, and smelting houses ; for in grounds close to these two latter, animals which graze there are often destroyed, and vegetation greatly impeded : indeed the miners, smelters, and people in the vicinity, are subject to the dry or convulsive colic, and paralytic affections.

These are the principal effects of the air—we must proceed to examine

2. ALIMENT ;

Under which term is comprehended all those esculent animals and vegetables, as well as liquids, by which we are supported, and which we use in common for the purpose of nutrition ; and
these

these are supposed to possess different degrees of nourishment, most of them having passed through some culinary process, more or less adapted to our nature, before they are received into the stomach, but which have particular portions proper to be assimilated, and form parts congenial with those of the human machine to which they are applied.

But before we enter on the particular nature of our various aliments, as we are writing to people who are not thoroughly conversant with the animal economy, it may be necessary to premise some account for their information, of the different processes nature has affixed towards the completion of this assimilation.

As soon as the morsel is put into the mouth, it undergoes, by the teeth, and action of the muscles of the jaws, a considerable division, by the office of mastication or chewing, in order that its texture may be broken, and mixed with a due proportion of saliva, before it passes into the stomach—some more fluid being acquired in its descent;—when it arrives at the stomach, it there gets blended with the juices of that organ, supposed, and proved by Spallanzoni, to be a powerful solvent of our food, and some small portion of bile; and, during its residence there, experiencing the effect of heat, and muscular action, from the coats of the stomach, and motion of the diaphragm, lungs, intercostal and abdominal muscles, and the large blood-vessels and parts which lay contiguous; it thence passes gradually, over the pylorus, or lower orifice of the stomach, and there meets with the bile from the gall-bladder and liver in much larger quantity—the pancreatic juice, or that of the sweet-bread, similar to the saliva, but rather more viscid—and the fluids separated by the intestines; and here it is subservient to the further action of the muscular coat of the intestines, and their peristaltic motion—churning, as it were, their contents and minutely mixing and blending together the food taken in; and the different juices, which it has received in its state of comminution and solution—from all which a milk-juce is formed, called chyle—this is separated from the feculent fordes, and taken up by a set of small absorbent vessels called lacteals—which open upon the inner coat of the intestines, and pass through the medium of the mesentery, which is the connecting membrane of the bowels, to the lower vertebrae of the loins, and there empty themselves into a vessel, called the thoracic duct, or receptaculum chyli—but there are, through the mesentery, various glands interspersed, through which these lacteals pass, and where the chyle is mixed with a thin lymph separated there for this purpose, in order to rend it more fluid. It is by these lacteal vessels, the motion of the intestines, and the force of the circu-

circulation unavoidably carried forward to the thoracic duct, as it cannot regurgitate, on account of the valves in various parts of these lacteals, which prevent its retroceeding motion—because they open only forwards—and are shut closer by any fluid pressing backwards: thus then is the chyle thrown into the receptacle—which continues its course, to the subclavian vein, along the vertebra—into which it enters, and from whence the chyle is poured, and thence immediately thrown into the right auricle and ventricle of the heart, where it mixes with the blood, and passes into the lungs—here it receives a considerable trituration, receiving material alterations from thence, and from what it receives from the atmospheric air inspired into that organ;—from the lungs it returns through the pulmonary vein into the left auricle of the heart, then into the ventricle—from whence it passes, mixed with the sanguinary mass, into the aorta, or large artery; and is diffused universally through the machine, where it is completed for the purposes of nutrition—being perfectly assimilated into the nature of animal juices—and by its proper application to particular parts, wanting the addition of nutrient fluids, renews what has been abraded, and thus keeps the machine in a state adapted to the performance of its necessary functions, supplying portions proper for the requisite secretions. By these various means is this assimilating effect produced—a contrivance, which nothing but divine and beneficent Wisdom could be adequate to bestow—for let the animal be fed upon food, ever so various, and dissonant in their own peculiar properties, still that power can convert materials so disagreeing to the advantage of the creature feeding upon them; nay some, such as goats and asses, will be nourished by the products of nature—which, to horses, oxen, sheep, &c. prove the most fatal poison.

It is most probable that our first food was of the vegetable class, in the selection of which, man was directed by experience, led to it from the smell and taste; and the support and increase of strength from thence consequent, would confirm their use. But beasts being troublesome to the cultivators of the earth, and vegetable diet not being proper to support sufficiently those who were employed in such labour, the flesh of animals made a necessary addition; of which we find a great variety at present are appropriated as common food, and the catalogue of which luxury hath, in no small degree, augmented.

Notwithstanding food is required to repair those particles which have been worn away, and dissipated by perspiration, still a constant and quick repetition is also requisite; for the blood, from its own disposition apt to run into the nature of lixivial salts, continually approaches near to putridinous acrimony, from

the circulatory motion and heat it perpetually suffers, by which the animal humors are greatly disposed to putrefaction.

But the blood also from perspirable matter passing off, acquires a disposition to coagulate, and the restitution of the watery fluid; that its globules may be separated, and preserved in a state of stupidity; and consequently the rest of the humors in a proper disposition for secretion.

These truths are demonstrable, not only by their causes, but the appearance of men and animals, who die of hunger—for it is common for them to have an acrid, fetid, offensive breath; their teeth loosened by corrosive saltiness—violent pain in the stomach—acute fevers, and delirium.

The nutritious part of the food, from animals, consists of a gelatinous lymph;—from vegetables of a farinaceous substance—in which is a portion of vegetable acid, oil, and saccharine or sugary matter; consequently, where the digestive powers are perfect, those which abound most with such matter in their respective classes, are the most nutritious.

But animal lymph, or the finest or most subtile part of the fluids, affords the quickest and strongest nourishment, as it is nearly elaborated into juices similar to our own; vegetables less so, as most of the esculent roots, plants, and fruits, are of an acescent nature, few are alcalescent, or replete with stimulant or aromatic particles; few are possessed of gelatinous lymph, and only are nutritious from their farina; not many changing into those humors called indigenous, or natural, after having passed often through the course of circulation.

Notwithstanding which, it would be extremely improper for men to live alone on animal food; lest a habit should be induced too full of blood, and too replete with putrescent juices; creating ferocity, scurvy, fætor, leprosy, and all kinds of lixivial corruption; as in the case among the anthropophagi, or those who feed on human flesh; all which mischiefs, by change of diet, and living solely on vegetable food, are conquered.

Hence, in warm constitutions, hot climates and seasons of the year, men who are indisposed, as well as those in health, have a greater propensity to acescent vegetables, in proportion as the heat is more or less excessive; and hence men in very hot countries, commonly live on vegetables, seldom or not without danger, on animal diet; but in cold countries, the practice is safer, and more free from inconveniences: for this reason, bread, or farinous substances analogous to bread, is universally made use of; but we should observe, that vegetable food, besides its acescent property, is replete with fixed air.

From what has been said of the nature of aliment, the utility of mixed diet, vegetable, and animal, will be obvious; as they

are

are correctors of each other ; hence likewise will be allowed, the propriety of uniting acids, or sour sauces with high-seasoned dishes, or eating them with the flesh of animals, whose juices tend to promote saline acrimony ; as fish, wild fowl, &c. and we may deduce also the following conclusion :---That ANIMAL FOOD is most nutritious, heating, and stimulant, disposing to putrefaction. ---VEGETABLE—less nutritious, cooling, diluent, acescent, slightly aperient, and corrective.

We must now advert to our third point—

3. EXERCISE and REST.

And when we speak of exercise, we include that of the mind, with the body ; for these two are so intimately connected, that they produce a variety of effects one on the other.

To exercise, the ancients have, as well as the moderns, indeed ever attributed great utility, particularly in pursuing it with propriety, and have allowed, that great constitutional mischief may be derived from its abuse or neglect.

It has with great justice been considered the sole instrument of the cure of many diseases, especially those of the glandular system ; and SYDENHAM had so high an opinion of it, particularly riding on horseback, that he affirms, “ Mercury for the lues venerea, nor the bark for intermittents, are not more certain specifics, than riding on horseback for a consumption ;” though here he seems to be sanguine in his opinion, and has given too great latitude to the salutary effects of this remedy ; for, certainly there are cases of consumption where riding becomes injurious ---but the consideration of the subject belongs not to this place ---we shall speak more minutely of it, when we come to give particular directions on that complaint.

Exercise consists in local motion of the body, and that motion more powerful of the limbs. It has been divided into serious, and amusing : that belonging to labour is of the first class---diversions the second. GALEN hath written pretty copiously on the subject, and pointed out when it might be salubrious, and otherwise.

Severe exercise, when we exert quick motion, called gymnastic, extenuates the body ; the contrary renders it gross ; long continued, dissipates its moisture, and occasions dryness : moderate makes it fat. However, well-regulated exercise, we find, in general, produces a freedom of circulation, assists digestion, promotes perspiration, and increases glandular secretion and excretion ; by which mean such as is proportioned to the strength ---carried beyond that, it occasions fatigue, and becomes instrumental in producing those evil consequences, it otherwise is cal-

culated to remedy ; for when too freely used, it is the source of loss of appetite, great thirst, loathing of food, heat in the bowels, costiveness, chillness, rigors, and fainting. And this must be the case, when we consider the effects produced in the system, by that which is judiciously adapted ; as by increasing the oscillatory motion of the vessels ; that is, making their contractions and dilatations quicker, their contents are properly comminuted ; all crudities destroyed---the blood rendered bland and mild---the *sordes*, or gross part, thrown out of the habit---the vascular system strengthened, by which the nervous power becomes equable in its action, and, consequently, the solids of the animal firm, and the fluids pure.

The mind also has its influence, for though by its exercise it may be made stronger---still, if not kept within proper bounds, it brings on fatigue, and hebetates, or renders the moving powers of the machine inert and dead. Hence the exercise intended to promote and preserve health, should be such, as is united with mental amusement, rather than labour---inasmuch as in the former, the mind is exhilarated ; will communicate agreeable sensations, and give firmness to the moving powers.

REST is also necessary to relieve both the mind and body ; such as is sufficient to free the vessels from the stronger exertions of their elastic force, recruit their strength, and set thinking faculties at rest from their labour. But this, if carried to excess, becomes indolence, and lays the foundation for those disorders, which arise from inactivity---and this brings on universal relaxation of the solids---glandular obstructions :---enervates the system, vitiates the humors, creates pains in the stomach, flatulencies, indigestions, &c. and renders the affections of hypochondriac people, and those who are gouty, in a great measure incurable.

From what has been advanced on this subject, the subsequent deductions may be drawn---

That EXERCISE and REST may be considered *mental* as well as *corporeal* : the FIRST, in moderate, degrees, should be esteemed *properly stimulant, a strengthener of the system, promoting digestion, circulation, secretion, and excretion* ; the SECOND, *restorative chiefly, but both in extremes, debilitating*.

The next of the non-naturals which present themselves to our consideration, are,

4. SLEEP and WAKEFULNESS.

And these produce nearly the same effects as the former---only muscular force is less employed in wakefulness than exercise, and the animal receives most of his detriment from vascular action, and debilitating the nervous influence ; and by too much sleep the body is apt to become sooner relaxed---have the mind more
inert

inert, and, consequently, more liable to those complaints which arise from universal indolence---though these, in moderate degrees, are essentially necessary and salutary; *for moderate sleep* increases perspiration, promotes digestion, cherishes the body, and exhilarates the mind---*whilst the contrary extreme* renders the habit phlegmatic and inactive, loads it with crude humors, renders the vascular system sluggish and inert, disposes the solids to relaxation, impairs the memory, and stupefies the understanding :--- on the other hand, *excessive watching* dissipates the strength, produces fevers, dries and wastes the body, and anticipates old age. It has been thought that different ages of life, as well as constitutions, require more or less sleep---for youth, or manhood, six or seven hours; for infancy, or old age, eight or nine; but the infirm ought not to be limited, they should be permitted to indulge in such a measure, as is found from experience necessary for refreshment.

From the general effects produced by *sleep* and *wakefulness*, they may be considered as nearly similar to those of exercise and rest, and may also be concisely marked down---as *stimulant* and *sedative*---producing every good effect by their moderate use, and proper adaption; and a variety of mischiefs by their abuse, or excess.

The next in order follows the fifth series---

5. REPLETION and EVACUATION.

But little can be said relative to these in this place—for if what should be evacuated is retained too long, or in too great quantity; if what should be retained is evacuated too freely, they all constitute diseases—and will be treated under their respective heads.

If perspirable matter passes off not as it ought, but is obstructed—plethora, or too great plenitude, fevers, head-ach, giddiness, inflammations, &c. will ensue.

If what we eat lies too long on the stomach—indigestion, heart-burn, pains of the stomach, flatulence, &c.

If there is any retention in the lungs—coughs, inflammation, asthma, &c.

If in the liver—inflammation.

In the gall-bladder—jaundice &c.

In the bowels—costiveness, and its consequences.

In the bladder—difficulty in making water, inflammation, &c.

As the retained matters, from their delay, may acquire different properties according to their nature, and may create disorders consistent with their acrimony, viscosity, quantity, or weight.

If too great a flux happens from the salivary glands—it constitutes a ptyalism, or salivation.

*If from the liver, pancreas, or sweet-bread, or intestines—chole-
ra morbus, or vomiting and purging of bilious matter, alimentary
flux, white flux, looseness.*

If from the bladder—diabetes, or morbid efflux of urine.

If from the genitals—feminal gleet.

*If from the skin—morbid sweating, called ephidrosis, besides
a variety of others, which may produce general affections, ei-
ther by sympathy or acquired acrimony, as the nettle-rash, in-
fantile hectic fever, &c. And these retentions or evacuations
are to be remedied by such applications as the medic art affords.
Nor need these have been mentioned here, only to shew their
consequence in the animal œconomy—as for the well being of
the machine, it is necessary that parts where these retentions and
evacuations occur, should perform their functions properly.—Of
these nothing more can be said, we shall, therefore, advert to
our last subject.*

6. PASSIONS, and AFFECTIONS OF THE MIND.

Every man is truly sensible of the ill effects arising from giving way to those variety of affections which we call passions; and fatal experience often convinces and makes them lament being so prone to act obedient to their impulses. So strongly do they affect the human machine, that the most surprising consequences have been known to originate from these sources on the corporeal, or solid parts, as well as the system in general.

There are innumerable instances of fear creating a sudden and powerful action of the bowels and urinary passages. *Fright* has put off a fit of an intermittent, when all remedies had failed; a pistol fired in the chamber of James the First had this effect, occasioning also a sudden action of the intestinal canal downwards; it has also given rise to an indissoluble tumor in a woman's breast; *excess of joy* has caused fainting and stupor; *anger*, induced apoplexy and phrenzy.

We cannot account for the precise mode in which these happen for a certainty. Hence, says a learned author, "We must content ourselves with knowing they are positive facts, for, till we are informed by what means the mind and body are united, we cannot even form a probable conjecture, how the operations betwixt them are performed."—In these cases, however, I think that the peculiar state of the constitution, with regard to its nervous incitability, vascular irritability or torpor, renders people more or less liable to feel these impressions, if not
totally

totally, still in a very great degree; for all those, which we call nervous, are more subject to manifest the action of these sudden or mental affections, than those who have an apparent firmness of the nervous system, and whose vessels are not so irritable as very readily to feel the impulses of their affections---to me it has appeared to be universally the case.

However, with respect to the passions themselves, they may be medically reduced to two heads---*volatile* and *saturnine*; or *active* and *sedative*.

But as disquisitions of this sort would lead us more into the field of speculative curiosity, than practical utility, I shall content myself with taking a quotation or two from a judicious writer on this subject---and from thence make the application to ascertain the propriety of the division.

“ Fear, grief, and those passions which partake of them---as
 “ envy, hatred, malice, revenge, and despair, are known by ex-
 “ perience to weaken the nerves; retard the circular motion of
 “ the fluids; hinder perspiration; impair digestion; and often
 “ to produce spasms, obstructions, and hypochondriacal disor-
 “ ders; and extreme terror has sometimes brought on death.”

These I term—*saturnine* or *sedative*---because they affect the nervous system in such a manner, as to impede its influence in general---consequently, the action of all those parts that are dependent upon it, and where any of them seem to act supernaturally, that action is occasioned more by irritability, or pre-disposition of the part, than from any other cause.

“ Moderate joy or anger, on the other hand, and those passions
 “ and affections of the mind, which partake of their nature---
 “ as cheerfulness, contentment, hope, virtuous and mutual love,
 “ and courage in doing good, invigorate the nerves, accelerate
 “ the circulating fluids, promote perspiration, and assist diges-
 “ tion :---but violent anger, which differs from madness only in
 “ duration, creates bilious, inflammatory, convulsive, and some-
 “ times apoplectic disorders, especially in hot temperaments---
 “ and excess of joy destroys sleep, and often has fatal and sud-
 “ den effects.”

These I term *volatile* or *active*---because they so affect the system of the nerves, that they increase its influence---consequently the action of all the parts dependent upon them, which, whilst moderate, produces salutary effects; but when too violent, necessary deleterious or dangerous ones, from too great an excess of action.

Hence, though we cannot influence the mind in the particular manner we wish always, we should endeavour to raise such sensations,

tions, as may be productive of those purposes, we are desirous by other means of promoting.

Where the action of the vascular system is too violent, we should attempt to inculcate fear—where too torpid, cheerfulness; for these may in some degree, have effects on the moving powers.

In treating of the non-naturals, though we have spoken of the solid aliments by which we are nourished, we have not said any thing of the liquids we in common use, we must, therefore, in order to render our labour completely useful, advert to them, as much benefit is to be derived from a thorough knowledge of their properties and effects, and no small degree of mischief avoided.

It is indeed a melancholy consideration to reflect, that, though health is the only foundation of all pleasure, and may, by easy methods, be preserved, men should neglect these means, which would enable them to pursue their darling Goddess through all her varied scenes of rational delight; but so it is; for notwithstanding innumerable authors have written professedly on the diætic regimen, from the unwillingness valetudinarians have in complying with rules, which lay a restraint upon the gratification of their appetites, though calculated to preserve health, it has been too much neglected.

Election treats, Parish dinners, Session and City Feasts, and free luxurious indulgence, have numbered many with the dead, which proper abstinence might have preserved. However, as men will not refrain, but rather become slaves to excess, duty calls upon us to apprize them of their danger, at least to inform them in what things they may exceed with the least possible inconvenience. In addition, therefore, to what has been already advanced, it appears necessary to take a survey of the properties of those liquids we in common drink—which have been considered with regard to their powers---as either

DILUENT, SHEATHING, NUTRITIVE, STIMULANT, ANTISPASMODIC, or SEDATIVE, which in their order we shall now attempt to explain.

1. The DILUTING LIQUORS—are all such, as added to the circulating mass of fluids, renders them more fluxile—by producing no other effects than what arise from mere mixture and divisibility of the integrant parts, and solution of the acrimonious and saline particles therein inherent.---Of this class therefore, we consider

Water, Small Beer and Tea.

The former of which appears to be the most eligible beverage.

as it is free from saline matter, and abounds not with air, in such a proportion as might occasion fermentation: that is preferable which flows from mountains through sandy soils; is the coldest, limpid, most light, and insipid to the taste---as it is better calculated to afford a well-diluted chyle: but of all, *that* which is distilled is the most eligible, as being thrown into a state of vapour by heat, it is divested almost totally of those earthy, heterogeneous materials with which other waters are apt to abound---hence, consequently, in its purest state.

This fluid, besides thinning the blood, and dissolving the saline and scorbutic acrimony of the juices, renders the circulation easy and uniform by attenuating any viscidities; it restrains, by its coolness, the quick motion, and intense heat of the humours; moistens, and mollifies rigid fibres---and if a glass of cold water is taken going to bed, it promotes perspiration, and often brings on gentle sweats.

Good small beer has the same properties, but is more apt to occasion fermentation from the saccharine substances with which it is, though slightly, impregnated, and is more viscid---and from these it may be considered as rather more nutritious.

Tea is also a proper diluent, and assists digestion, drank a proper time after dinner, where it does not disagree with the stomach, as in some peculiar constitutions, affecting the nerves of that organ, and the system of them in general, so as to occasion sickness, tremors, and fainting.

2. Those liquids are called **SHEATHING** which are mixed with mucilaginous substances, and produce their good effects, by involving the acrimonious particles of the blood---increasing its viscosity, and preventing them from producing, or at least lessening their stimulating powers on the vascular system in general---or guarding the stomach and intestines from feeling the effects of any irritating materials which may be therein contained---the principal of which are *water* mixed with oatmeal or wheat flour, called *gruel*---or with hartshorn shavings, salop, fagoe, tapioca---and boiled till the mucilaginous parts of these are dissolved, and then are considered as emollients or demulcents---or where substances are replete with oleaginous particles, suffering similar solution in the same menstruum---hence partake they also of a nutritious property: here then to the list may *chocolate* be added---*fat broths*---*milk mixed with suet*---the last, a food not uncommon, and very useful to such as are subject to constant diarrhoea, or looseness, from acrimonious humours poured upon the bowels---which is improved by the addition of a little starch---and all these are considered much more nutritious than those of the former class.

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3. The NUTRITIOUS—are all such whose particles are capable of being assimilated to the nature of the animal juices by the digestive powers of the constitution, and partake of these properties in a greater or less degree, as their parts approach nearer to, or are more distant from, the nature of our fluids, before they are taken into the habit :—hence the most nutritious are—*beef, mutton, or veal tea*, as replete only with the finer juices—*soups, broths*—the soups sometimes, in the first digestion, are more stimulant, owing to the spices with which they are seasoned, consequently the most heating. Any of these above, however, made from the flesh of the older animals, are most nutritive—as they partake less, of vegetable nature, and have their juices more perfectly elaborated, and less subject to promote viscidities, than those from the younger species—and here may be enumerated *those made from hartshorn, or the jelly from that and isinglass*.

The next is *milk*, which approaches very near to the nature of chyle, whilst in the breast of the animal, though more closely allied to its perfect juices. It is divisible into serum or whey, cream, curds—of which last is formed common cheese.

Milk when cold loses some of its finer parts, and boiling robs it of more, by more copiously dissipating them : it is demulcent and nutritious, and partakes of a middle nature, between vegetable and animal, and is apt to curdle on the stomach, if it meets with a strong acid, too suddenly, or in many febrile disorders.

To some constitutions it is perfectly agreeable, creating no uneasiness, be the stomach in what state it may ; still in others it increases acidity in the first passages—it, in some, produces diarrhoea—others it renders costive ; in some it occasions the headache ; in others an uneasy sensation in the stomach, and pain—and many cannot enjoy the least ease, till it is ejected by vomiting : but where it agrees, no food can be more pleasant or salutary, where it does not increase corpulency. It has been the food of several adults for a series of time—and those who refrain totally from animal food, in this acquire an agreeable substitute.

The milk of an healthful young woman is, to the human frame, infinitely the most preferable, so is that of any animal to those of their own species, as more completely finished to their particular nature.—For medical use next succeed, the milk which has the greatest affinity with that of woman—in which respect these are thought to pursue the following order—*asses, mares, goats*, that of *sheep* and *cows*.

The next which succeeds to this is—

Chocolate—though it partakes not of animal nature, still from
its

its being more replete with oil and saccharine substance, it is not only nutritious but demulcent---though it is apt sometimes to sit uneasy on the stomach, if it is made too thick, or not well milled or ground---but more particularly when the nut is badly prepared, or when it is decayed, greasy, and rancid---made thin, it is light: therefore when chocolate, from its richness, creates any uneasy sensations on the stomach, a glass of water taken afterwards, by rendering it more dilute, will prove a remedy---but from its abounding with a quantity of oil, it requires the powers of digestion to be very active for its assimilation: hence, it should never be drank in too large quantities at a time. The least nutritious of this class are some of the sheathing liquids we before mentioned, as *gruels, sago, salop, tapioca*---because they partake solely of vegetable nature, and are not so replete with oleaginous or saccharine substances, but are merely mucilaginous.

4. The STIMULANT are---

Coffee, wine, punch, perry, cyder, ardent spirits; taken in moderate quantities---in larger, they exert sedative effects perceptibly; but as we conclude they always exert this last effect, though in a degree only proportionate to the quantity taken, we think it right to take a view of them in their state of combination to avoid perplexity---and therefore we mark them down

25

STIMULATING and SEDATIVE.

The first of which consist of such materials, as by their active powers, irritate the stomach, occasion warmth there, communicate it to the constitution in general, either by sympathy or vascular irritation---increase the circulation of the blood for a time---exhilarate the spirits, increase perspiration, and invigorate the whole system---or, taken in large quantity, produce such effects sympathically upon the common sensorium, or force the blood so copiously and powerfully upon the brain, that it is incapable of feeling the effect of pain or rather uneasy sensation---indeed, sometimes this insensibility may be carried so far from this cause, that people become apoplectic from the increased pressure on the brain---or from impeding sympathically, or mechanically, the power of nervous influence, expire.

Of this class, we consider

Coffee---though never attended with any of these violent consequences, must be ranked under this head, as one of the slightest kind---for it is of a more heating nature than tea---gently stimulant, astringent, and resists putrefaction; it also moderates alimentary fermentation---though, like tea, it is not agreeable to

every constitution; as in some it will produce, particularly in those who are delicate, nervous symptoms: it decreases corpulency, and is serviceable to gross, phlegmatic habits.

Dr. Gallen, speaking of coffee and tea, says,

“ Their effects, in my opinion, are very much mixed, depending on the warm water;—the assisting digestion—relieving the stomach from a load of aliment—from crudities—alleviating head-achs arising from them—promoting the secretion of urine, and, perhaps, perspiration, may all fairly be attributed to the warm water. These are the chief virtues to be attributed to tea and coffee.

“ The weakening the tone of the stomach by frequent use—and the system, in consequence, inducing tremors and spasmodic affections, are the effects of the tea itself, though, in some measure, of the warm water.” And, certainly, great mischiefs are done by drinking them too hot—a very common practice by very delicate constitutions; for, by these means, the stomach is brought into too great a state of relaxation—indigestion occasioned—crude chyle thrown too freely into the habit—obstructions formed in various parts, and a general state of debility, with a variety of painful consequences, occasioned through the whole system.

Wine, spirits, ale, porter, cyder, perry, punch—may all come under the same description with regard to their powers, if we make some allowances with respect to a few trifling peculiarities which occur; for they all of them are stimulants to the stomach and system in general; possess some antispasmodic powers, and increase circulation.

Spirits are more powerfully stimulant than wine, less antispasmodic, and not disposed to run into the acetous fermentation.

Wine is endowed with stronger antispasmodic effects; cyder and perry next; porter and ale the least. Wine is more powerfully stimulant than these; less disposed to acidity, if pure, than cyder and perry—and all of them free from that tenacity or viscidiness in ale and porter.

Ale and *porter* are apt to load the stomach more, and require strong digestive powers to assimilate them: *porter* is supposed to possess stronger diuretic effects than ale—though they all have them in some degree—but amongst the spirits, that called Geneva shews them the most manifestly—of which the common sort, formed of ardent spirits, impregnated with terebinthinate substances, is the strongest—those impregnated with juniper berries the weakest.

But, as we can never get wine, though so valuable an article, whether considered as a luxury, or a medicine, completely perfect,

fasted, even that esteemed the most pure ; and as it is made such general use of—it will be advantageous to examine the parts of which it consists, by which means, we shall be enabled to discover how its action may be varied ; and, perhaps, the same holds good in all the rest, except spirits, though most probably in an inferior degree.

WINE has for its basis saccharine substances, of which it is formed by the process of fermentation, which converts the whole, not at once, but progressively, into a vinous fluid ; one part remains unassimilated—one is assimilated—and one becomes acid.

Hence wine is composed of three parts,

Must, pure wine, and vinegar.

Must, HIPPOCRATES describes the juice of grapes, recently expressed, crude, flatulent—only having one good property, it is aperient ; and if it does not act as a laxative, it becomes so much the more noxious to the body. It is, perhaps, owing to this that new wines, or other fermentable liquors, drank too early, prove purgative as they generally do.

Some authors have said, that *must* is, properly speaking, what is called *sweet wines*. It should, with more propriety, be considered as something different. formed by the fermenting process ; because, by fermentation of sugar on the stomach, a subtle fluid, called by the scholiasts, gas sylvestre, and considered by them as a fixed, fastitious, and fixable air is produced, which acts on the bile, prove laxative, &c. But *must* acts in a less quantity than sugar, and therefore must be something altered from the saccharine substance, now changed in its properties :—whatever it is, it destroys the tone of the stomach--disposes it to spasmodic contractions, and, consequently, disturbs and interrupts digestion. If acidity is produced, it will join with the gas sylvestre in weakening the stomach---the acid thus formed will unite with the bile, produce a strong stimulus---thus occasion a flow of mere bile to the intestines, and cause what is called the cholera morbu-, a copious evacuation of bile upwards and downwards, with violent spasmodic affections---but these effects are seldom produced to such a degree of vehemence.

The active part of the juice of the grape is called ALCOHOL, or the spirit of wine, but weakened in its action in its compound state. This exerts itself on the nervous system, chiefly, if not altogether, by means of the stomach ; hence it is stimulant, increasing circulation, and the force of the nervous power universally.

In large doses—ALCOHOL DESTROYS THE MOBILITY OF THE NERVOUS POWER—WHENCE, FROM ITS STIMULANT AND SEDATIVE EFFECTS—*confusion of ideas and delirium* ; STILL REPEATED,

ED, *the nervous flow is arrested---voluntary and involuntary motions destroyed---sleep, lethargy, apoplexy, and death, are the consequences.*

In WINE, the effects are almost never so rapid, on account of their dilute state, and small doses in which the alcohol is thrown in; on which account it proves only more stimulant and exhilarating—it may produce stupor, but as it is apt to be rejected by the stomach, and by other matters with which it is mixed, the powers of alcohol is moderated.

PUNCH, which is only an artificial wine, is less noxious than alcohol and water, though more so than wine.

Though an acid is evolved, and enters into the composition of wine, and alcohol, still another, and more copious and separate, is formed—which is

VINEGAR.—This commonly contains some sugar, *may be laxative---have the effects of unconverted sweet wine---generate gas sylvestre, that subtil fluid; and, in short, have all the properties of fresh juices: when thoroughly converted, it determines other vegetable juices to acescency---weakens the stomach---proves spasmodic---and has all the consequences of acids there generated.*

But combined with wine, these qualities are more innocent; as the action of must, alcohol, and vinegar, separately may prevent each other's simple and deleterious effects; and also the water may, in the proportion in which it is mixed, have its efficacy in weakening the properties of the other component parts.

CYDER and PERRY may be considered as having the same properties, though in much less degree than wine, with regard to their stimulant and sedative effects; but are more replete with acescency—generate too great degrees of flatulency, run quicker into the acetous fermentation, and produce uneasy gripings, and more painful sensations of the bowels, besides being more productive of calculous complaints, and the convulsive colic, or dry belly-ach, terminating often in palsy.

From this review we can easily judge of the effects, whether advantageous or otherwise, which are likely to ensue from wine, and also from the different compositions sold by our retail vendors and wine merchants, under that title; which produce disagreeable consequences to those who drink freely of it---laying the foundation for a variety of dangerous, lingering, and fatal complaints. In order to shew which, we have been at the pains of going more minutely into this subject, that we might explain the particular parts of which wine was composed—declare the properties of them separately—manifest what were salutary, what otherwise; as also the necessity of a proper combination to form their utility; and hence be enabled to discover how the poi-

poisonous compositions, sold under that appellation, must invariably produce their baneful effects ; for these are made of the unfermented juices of some vegetables—sweet raisin wine, cyder, and British spirits ; and this jumble is coloured with some ingredients agreeable to the wines intended to be imitated—with the addition, sometimes of a small portion of wine, and constantly of that noxious material called sugar of lead, or lead itself, forming this substance by the union with a portion of acid they contain. Now compounds like these must be replete with those mischiefs which we have enumerated under *must* and *vinegar*—and others brought on by the sedative astringent powers, occasioned by preparations of lead—rendering the action of the stomach and intestines torpid, relaxing these organs, obstructing the exit of materials which ought to be thrown out of the body—filling the machine full of crude and acid humors—contaminating the whole mass of fluid—and preventing digestion, that parent of almost all chronic diseases. When we, therefore, speak of wine, we would not be understood to mean these baneful compounds : but that which is pure, as can be imported, which MACKENZIE says, “ is an admirable liquor, and, used in moderate quantity, answers many purposes of health ; and beer, well brewed, light, of a proper strength and age, if we except water and wine, is, perhaps, the most ancient and best sort of drink in common use among mankind.”

But with respect to wine we may carry the matter further, for it is generally allowed to be the most agreeable and powerful cordial we can have recourse to in the last stage of some fevers, completing of itself the cure. In low nervous, and putrid fevers, it is beneficial throughout—when there appear symptoms of great debility—and it may be very often taken in large quantity, where the moving powers of the system abate much of their salutary action, and the fluids seem to be running rapidly into a state of putrescency.

How much, therefore, is it to be lamented, that we should be deprived of so valuable a liquor—replete with so many useful properties by the avarice of a set of beings, who are suffered to impose upon, and injure the public with impunity, and amass fortunes, by selling poisons for our destruction, instead of wine for our preservation and recovery of our health. For, I am persuaded, thousands have fallen devoted victims to this illicit and infamous practice. In lieu of these, where people are under the necessity of purchasing wines, rather than depend upon the *worldly integrity* of these dealers, I would recommend the wine properly made of raisins, or the fruits of our own country, they are infinitely

nitely less noxious, nay, indeed, may be made equally efficacious to the others in their purer states.

5. The next which are to be spoken of, are those invested with

DILUTING *and* NUTRITIVE POWERS.

And these are chiefly all those where water abounds, and are impregnated with farinaceous, saccharine, and animal substances; in which will be included, *gruels* and *weak broths*—the latter of which, as also *soups*, when thrown into the habit, may be considered as possessing some degree of stimulus, adequate to the nature of animal food in its solid state, but weaker in degree: and these will be more or less diluting and nutritious, in proportion to the quantity of water and other substances they contain—the diluent property depending upon the former—the nutritious upon the latter; the particulars, relative to each of which, may be collected from what we have delivered in our first and third section on this subject.

6. Our last are,

The NUTRITIVE, STIMULANT, *and* SEDATIVE;

Such as, in some degree, possess these separate properties—which may be confined to

Ale and *Porter*—the stimulant and sedative powers of which have been spoken of when we treated of wine, of which these may be considered as species, made of malt—though to porter there is a mixed and strong sedative power, inasmuch, as it appears to have some narcotic ingredient infused it, as the *coccus indicus*, the Indian berry, *opium*, or some materials of a similar nature. However, that they are very nutritious, needs no arguments to prove, we have only to depend upon facts; for it is observable, that all who drink copiously of these liquors, are corpulent, if they have powers of digestion adequate to their assimilation—common porters, coal-heavers, chairmen, &c. chiefly exist on this—drinking some gallons in a day; and indeed such, whose labour is very severe, require it: but in all such, it is necessary for their digestion to be extremely good, for these liquids abound with a great share of viscosity, which requires great constitutional strength, and strong labour to subdue. To delicate, relaxed habits, whose stomachs are weak, they create great load and oppression, much heat, and febrile affections temporarily induced.

What we have here delivered, perhaps may be by some thought of too trivial consequence; and is by many too much, even in the practice of medicine, neglected—still will be found, on experience,

perience, worthy of very close attention: for the knowledge from thence to be collected, and properly applied, as we shall soon have occasion to shew, forms one part of medicine, comprehending that which is filed—prophylactic or preventive—is, in many cases, solely curative, and should in all go hand in hand with the administration of the more active and powerful remedies in the cure of diseases. Indeed ignorance in these points, or an injudicious diætic course, will counteract remedies the most salutary on the one hand, whilst, on the other, an accurate knowledge, and proper combination, will greatly add to their efficacy.

Having now laid down the principles on which we shall proceed through the course of the subsequent work, almost solely in that part which is intended as the preventive, and, in a great measure, in the curative---we shall proceed to the former, after recapitulating some particulars, in order to form general rules for our proceedings, and render all our directions easy and intelligible.

S E C T I O N VI.

CONSTITUTIONS MORE PARTICULARLY SPECIFIED.

WHEN speaking of constitution in our former Sections, we have enumerated that variety which is generally adopted, in order to shew what ought to be understood by the different terms, and by what constitutional causes they were produced—and have divided them into *simple* and *general*---*mixed* and *general*—and *peculiar*---as

The strong and robust,
Weak, relaxed, and delicate,
Nervous; or incitable,
Irritable,
Torpid,

And their combinations—that is, the union of two or more, as they happened to be possessed of incitability, irritability, and torpor; and these could only occur, with respect to the solids—but as the fluids also are concerned, it was necessary to take them into the accounts; we therefore conjoining them with the former, with respect to their quantities, qualities, and effects—have filed them MIXED—as when associated with

Plethora,
Acrimony,
Heat,
Cold,

Or having Consumptive tendency. As for those we den

ed *peculiar*, they depended on accidental circumstances, as a review will convince us, and unnecessary to be taken into the general account, as to those alone must our modes of prevention, mitigation, or cure, be directed; for it is by regulating their operations alone, that we must in all cases expect to derive benefit. Some also of which may be omitted, as they deduce their origin from particular affections of the other in combined states, as the *hot, cold, and consumptive*.

We, therefore, shall arrange Constitutions under the following heads:

A. The strong, and robust,

More or less irritable,	}	Plethoric,
_____torpid,		Acrimonious.
_____incitable.		

B. The weak, relaxed, and delicate.

More or less incitable,	}	Plethoric,
_____irritable,		Acrimonious.
_____torpid.		

With respect, then, to the first of these Constitutions; 1. The *strong, robust, and irritable*.

They are subject to many inconveniences, chiefly from the rapidity of the blood's motion; hence are liable to fall into violent continued fevers, and inflammatory disorders. To prevent which all excesses of hot or cold air should be avoided; stimulating aliment, high seasoned dishes, and such as are extremely nutritious; too sudden and violent exercises, repletion, and the more boisterous passions. They should observe temperance in all things, and especially keep free from immoderate drinking, and take care that none of the natural evacuations, should be checked, or obstructed, such as that of perspiration, urine, feces. They should have recourse to occasional bleeding, when the head feels loaded, giddy, or when they are drowsy, and prone to sleep, or symptoms of general fullness are prevalent, but not use it unnecessarily, or too frequently, and empty the habit now and then by purgatives; they should drink diluting liquors, as water, or such where that is superabundant; in general be sparing of animal food, and rather eat freely of vegetable diet, for these are apt to be plethoric, or loaded with too great a proportion of sanguinary mass: for such, a moderate, warm, and moist atmosphere is the most eligible situation; in fine, nothing should be allowed them that will increase too powerfully the action of the living solids, or occasion too great an increase of the fluids. These Constitutions are in general warm.

2. The

2. The *strong, robust, and torpid.*

Where, though the stamina are firm in too great a proportion there is a defect of irritability the vascular system being in too torpid a state. These require not any particular attention, as from the want of proper sensibility they will not be exposed to feel particular changes arising from common causes, or such as would effect those which are more irritable. These constitutions bear all evacuations well, as they are not apt easily to have their solids too much relaxed, but are rather prone to become plethoric, from indulgence, which they are apt to run into, from not feeling those effects, which people of different habits so frequently experience. They should endeavour to prevent an overfulness either by abstinence, or proper evacuations, which they bear in general without inconvenience, though bleeding in these is less adviseable than purging, owing to the torpid state of the system; and, which, being neglected, should a plethora be the consequence, some of the internal parts of the habit, as the brains, lungs, &c. might be affected by dangerous, or at least troublesome oppressions, and we very often find men of this Constitution for want of timely care, and from indiscretions, afflicted with sudden vertigos or giddiness of the head, coughing up blood, apoplexy, &c. and these are sometimes the effects of a cold though plethoric, and apt to fall into hypochondriac affections from visceral accumulations, and languid circulation.

3. The *strong, robust, and incitable.*

This Constitution sometimes, though more rarely occurs, and when it does, it generally is united with vascular torpidity. In men of this habit are subject to a mixture of the nervous system; and hypochondriac diseases; irascible at trifles, and desponding nearly approaching to melancholy, they are apt to be afflicted with various spasmodic affections, particularly of the throat, intestines, and stomach; sometimes make profuse quantities of pale, limpid water; at others, small, but turbid, and high coloured; they are frequently tormented with flatulence, and perplexed with whimsical and inconsistent ideas; the extremities are generally cold, and moving from place to place, or any motion almost is performed with languor—most of the evacuations are lessened, or irregularly performed; sleep is imperfect, they are troubled with frightful dreams, and are subject to the incubus, or what is called the night-mare, and all these are derived from the same constitutional sources, when torpor attends; for from the want of due power of the muscular fibres, the circulation of the blood is not carried on with full freedom to the extremities, the internal parts consequently

frequently are loaded, hence in those parts there is an additional fullness and stimulus, for the stimulus is always in proportion to the quantity of blood flowing to a part or collected in it, from the evolution of the heat, and the superabundance of acrimony, for the fluids of these constitutions generally abound with acrimony, particularly such as is productive of the nettle-rash; hence, then, the internal parts become more sensible to the nervous influence, consequently solicits it the more freely; and hence arises the appearances above enumerated.

In these habits—frictions on the extremities, warm cloathing, warm bath, riding on horseback, are essentially necessary; generous diet, wine, stimulating vegetables should be adhered to, food of easy digestion the mind should be kept perfectly at ease, cheerful company, change of scene, and such amusements as divert the attention, produce a moderate degree of mental hilarity, should be procured; and as for medicines, they should be such, as at the same time, that they allay the incitable power of the nervous system, diffuse a general warmth through the habit, and these given occasionally, as asafoetida, musk, vitriolic æther, camphor, but all opiates must be avoided, because they are apt to render the muscular fibres too torpid—in general chalybeates may be persisted in, and Bath waters should be recommended.

But where instead of torpor, vascular irritability is a concomitant, besides being subject to inflammatory complaints, and continued febrile affections from slight causes, they are subject to permanent spasmodic affections, such as those which are denominated by medical men, tetanic complaints, where, when spasms arise, the muscular fibres remain in a fixed state, not contracting and relaxing alternately, nor fugitive as in common convulsions: these are liable to be seized with a locked jaw, and continued muscular rigidity. In these constitutions, warm baths are peculiarly useful, gentle and constant exercise, cooling diet, and copious dilution with aqueous liquids, thin acescent wines, milk and vegetable diet, evacuations of all kinds should be constantly and moderately produced, particularly perspiration, and the body should never be costive; I have said moderately, because in endeavouring to abate the irritability of the system, we must be careful not to increase the incitability, which is apt to be the case, from evacuations too copious. Opiates are in these habits extremely useful, and may be freely given under particular circumstances. With regard to regimen, what we have said before in the beginning of this section may be adhered to, taking especial care to avoid all mental uneasiness. These constitutions are apt to be plethoric and attended with heat.

What we have delivered appertains to those who are considered
to

to possess strong degrees of muscular firmness, differently combined. We must now proceed to such as have a **WEAK, RELAXED, DELICATE HABIT, JOINED WITH TOO GREAT INCITABILITY.** And this circumstance generally occurs in these habits, that they have also too great a share of irritability. These are subject to painful and spasmodic diseases; and the more delicate sex of this constitution are prone to hysteric affections from the relaxation and irritability of their habits. They also are constantly attacked on every slight cold, with slow fevers, and have their digestive powers loaded with saburra, or different kinds of ill digested matters in the stomach and bowels, making their way into the habit in this noxious form.

To these, a dry, clear air is essentially necessary, moderate exercise, particularly riding, cold bathing, and chalybeate waters; animal food easy of digestion, and free from fat, and a temperate use of astringent wines. Vegetables should be administered sparingly, and those of the less flatulent kinds; food and liquids, viscid and tenacious, such as flour puddings, potatoes, oysters, strong soups, and malt liquors, ought to be prohibited. Every thing calculated to strengthen the tone of the system, and preserve it in an equable state ought to be had recourse to, and all things likely to weaken it must be desisted from. Cheerful company and moderate amusements are serviceable, but pursued too freely, the reverse; for all fatigues, both of body and mind, are prejudicial—the custom of taking vegetable acids too copiously is also pernicious—hot tea, or any thing drank too warm—for these all contribute to relax and load the stomach and intestines, with foul, viscid materials, which produce therein internal stimulus, create flatulence, and communicate general irritability through the system. Blood should never be taken from people of this habit, but upon the most urgent occasions, and then only sparingly, in which cupping is preferable to the lancet; and it is safer to take it away at two operations, than at one, some little distance of time from each other, if more than six ounces should be required. All sudden changes should be avoided with the utmost caution, either with respect to cloathing or diet, the mind kept free from anxious cares—hence watering places are useful, where those impregnated with chalybeate particles, or iron, may be drank; in fine, every thing ought to be advised, which, in a moderate degree, can exhilarate the spirits, and contribute to give strength to the solids. These constitutions are generally warm, subject to irregular flushing heats, and have for the most part no small degree of acrimony in the habit. But there are some who possess too great a share of torpidity, and then they form that kind.

2. Where a **WEAK, RELAXED HABIT IS JOINED WITH A DEFECT OF SENSIBILITY**; and these are subject, not only to nervous affections, but to chronic and destructive diseases; for the circulation in all these is languid, and the absorbent system acts not with proper freedom. Hence will arise those complaints which depend on an acrimonious state of the humors, and an accumulation of the fluids in the whole, or particular parts of the system—as dropsy, jaundice, corpulency, scorbutic complaints, green-sickness so called, obstructed menses, glandular tumors, &c.

In these torpid habits, stimulants are useful, as also are evacuates; to these, a dry air and high situation are most suitable, with a generous diet of the more pungent class—such as the juices of the older animals. fish, mustard, horseradish, cabbage, and all of that class: brisk exercise on horseback, emetics, and frequent purging, in order to shake the vascular and glandulous system, prevent accumulations, remove obstructions, hinder the bile from stagnating, and the mucous fluids from collecting. All the natural evacuations should be kept free from suppression, to accomplish which, the system ought to be perpetually roused to action; hence indolence and indulgence in bed is to be particularly avoided; the thinner stimulating liquids, as white wine diluted with water, should be the common beverage, and the mind kept in a state of cheerful activity, free from all gloomy and desponding reflections.

Were the rules here laid down observed before our mass of humours had been contaminated by indiscretions and various species of debaucheries, which weaken and disturb the system in its performance of the proper offices allotted to her various parts, perhaps there would be little occasion to consider of those things, which are necessary to prevent diseases arising from a default of the *natural* humors of the machine; but as that is not the case, they call upon us for our consideration, as well as those which are fortuitously thrown into the Constitution. And those we shall divide into such as are first,

NATURAL,

And those which are

ACCIDENTAL.

The natural fluids are divisible into

General,

or

Partial.

§. 1. In the first or general, the blood offends by its too great quantity

quantity or state of acrimony. From the too copious state of this fluid, a variety of complaints may arise, and, therefore, when symptoms of oppression appear from this cause, which will generally manifest itself by languor, a sense of weight or fullness in the head, when rising in the morning from bed, or in stooping, and fullness also of the pulse; abstinence, indulging less than usual in sleep, increasing the natural evacuations, and using more exercise, will effectually reduce the body to its proper standard, if these things are had recourse to in due time, and persevered in for a proper period; the diet should be the least nutritious, more of the vegetable than animal class, the last eat of sparingly, confining themselves to one dish, and having it only once a day, and water should be the only beverage; but should inanition, or a want of a proper quantity of blood be induced by any cause, nutriment should then be given of the most quick and easy digestion—as teas, and broths made of the flesh of older animals, thin jellies, and the flesh of the younger animals, as chicken, rabbits, lamb, veal, &c. and in such quantities, though that can be readily converted into chyle—for it is a mistaken notion, to suppose the larger the proportion of nutrition thrown into the habit, the sooner it will be recruited; the reverse will happen, for by these means the digestive powers being overloaded, will be weakened, and consequently even a small portion be prevented from being properly assimilated, or reduced to the nature of our own healthful fluids, which they must be before they can answer the purposes for which they are intended—as on the contrary, if so much is only given as those powers can conquer, they will gain fresh strength every day, by the application of that which has been converted into a nature peculiarly adapted to the end proposed; and this quantity may be repeated as often as the constitution requires it. By this a further waste will be prevented, which may also in this view be assisted by the use of stomachics, which chiefly consist of bitters—as gentian, orange peel, quassia wood, slight chalybeates, gentle aromatics, and such like.

§. 2. But the blood may become acrimonious, and this acrimony may be considered of different natures. They have been divided into *acid*, *putrescent* and *muriatic*, so called from MURIA brine, a liquor made of common salt, which this muriatic humor is supposed to resemble; but we shall not pretend to advance this as a certainty, but confine ourselves to the effects of some acrimony, which seems different from the two former.

The *first* then, or the *acid*, is supposed to arise from weak bowels, and particularly observeable in our infantile state, and, perhaps, the stomach and intestines are the only place where such
acidities

acidities are to be found. To prevent which, we must endeavour to strengthen the digestive powers that they may make good chyle; hence after clearing the bowels with the sal polychrest, or small doses of calomel, and rhubarb and gentle emetics, slight doses of chalybeates may be had recourse to, mixt with rhubarb to keep the bowels gently open—weak broth should be given once or twice a day—panada, with a small portion of some agreeable aromatic well boiled; and such things as have in themselves the least tendency to acidity; frictions on the abdomen or lower belly, stomach, legs, and feet, with smart exercise, will be highly serviceable—as these will invigorate the system, promote a brisk circulation, and increase the action of those organs intended to promote the formation of good chyle.

The *second*, or *putrescent*; where the fluids tend to a state of putridity, shews itself generally by the face being puffed up, as it were, and tinged with a hue, somewhat approaching to livid; the breath offensive; the gums spongy, and bleeding on the slightest touch, nay, sometimes voluntarily :—here fresh air, austere wines, such as give a sense of roughness, or astringency to the taste, vegetable diet, ripe fruit, water impregnated with fixable air, smart motion, and corroborating bitters, with abstinence from animal food, particularly fish, promise fair for stopping the effects, which might otherwise arise, by checking the putrefactive disposition, and meliorating the fluids; moist, warm situations should in this case be particularly avoided—and living in close places much crowded with inhabitants—for nothing conduces more to bring on, and increase such a state of the constitution as these—by relaxing the solids, and furnishing a constant supply of putrescent effluvia.

The *third*, or what has been styled the *muriatic*, is indicated by hot eruptions, which itch much, attended with uncommon thirst and flushing heats; to alleviate which, the sulphureous, saline waters are recommended, particularly those of Harrowgate, Thorp-Arch, and those of Moffat, avoiding at the same time all heating, acrid food—such as turtle, high seasoned dishes, and rich soups—whey and milk in these cases are extremely beneficial; the SCORBUTIC JUICES, made of the juice of garden scurvy grass, water cresses, both expressed from fresh herbs, and of Seville oranges, two pints, spirituous nutmeg water, half a pint, these are to be mixed together, and after they have stood till the feces have subsided, the clear liquor must be poured off for use.—Of these juices, from two table-spoonsful to eight, may be taken two or three times a day; or a DECOCTION OF THE WOODS, made of *guaiacum*, or *lignum vite* saw-dust, three of the *sun*, two ounces; *sessuvias* wood, *sar-*

ed liquorice sliced, each an ounce; *water*, ten pints :---the guaiacum and raisins are to be boiled over a gentle fire, to the consumption of one half, adding towards the end the assafras and liquorice; strain off the liquor, and having suffered it to rest for some time, pour off what is clear—a quarter of a pint of this may be taken two or three times a day, and all such as are diuretic, and cooling; hence some of those waters are of service, which abound with saline substances, that are gently aperient, and move the urinary passages—as *Epsom waters*, those of *Cheltenham*, *Stoke*, or *Jessop waters*, those of *Pancras*, *Holt* in Wiltshire, *Stretbam*, and some others.

All cosmetics and repellent lotions are dangerous; for if the acrimony cannot be corrected or carried out of the habit, its most salutary situation must be external; and, perhaps, it may be the only means which nature has to unload the habit, or prevent the deleterious effects, which would be occasioned, were any of the more noble organs subjected to the depredation of humors so inveterate. To valetudinarians of this description a cool air should be recommended, and summer situation near the sea-coast;—all salted meats and fish should be prohibited; the body kept cool by saline aperients, and the mind unruffled by violent passions, and all excess in drinking refrained.

These constitute the first class of natural humors—the second are the

PARTIAL.—Where they only affect some parts of the constitution, and are not diffusive, but produce particular diseases from a peculiar species of morbid matter; and these are either generated in the habit spontaneously, or seem to arise from errors in diet, indulgencies, or irregularities with respect to the management of the animal economy; but these, if incapable of being eradicated, may be alleviated, and in some degree prevented.

The **FIRST** of which we shall mention is the *gout*; respecting which, though so painful, so dangerous and common a malady, I believe little-doubt remains but it may be weakened in its attacks, even in those who have been long subject to it, by temperance; that is, by properly regulating constitutions consistent with the powers they possess: and I am firmly persuaded it may be prevented from returning in the younger class of mankind, would they, on its first onset, prescribe to themselves and follow such regulations, as experience has, in many similar cases, proved to be conducive to these ends.

Adhering strictly to a milk diet has in many cases put a stop to returns of the gout; and regularity of living, with proper exercise—abstaining from wine and high-seasoned dishes, pickles,

and other incentives, that stimulate the appetite, and occasion men to overload, and weaken the tone of the stomach, and digestive powers, have rendered this malady infinitely more mild in its paroxysms. Men, with this propensity to the gout, should avoid every excess that has the least tendency to reduce the habit below the proper standard of health—either in eating, drinking, or venereal enjoyments: for it is by the slavish and constant pursuit of these particulars, and the great indulgence which they allow themselves, that we see so many martyrs to gouty devastation.

Early rising, moderate exercise, and that daily; bland mild food: abstinence from inebriating liquids, or a very moderate use of them, as also of concubinage, will ever be succeeded with such consequences, as will amply repay us for philosophic forbearance.—People of this constitution ought to refrain from weighty cares—the labours of the mind—much thought, anxiety, and solicitude: they should avoid all vexation, particularly as nothing disposes more to bring on fits of the gout, by occasioning crudity, and indigestion, from weakening and rendering the action of the stomach too torpid.

Various modes have been recommended for preventing the accessions of the gout—but what seems to have gained credit from the experience of several intelligent men, is the use of sulphur; of which a drink is made by impregnating water with a proper proportion of it, and this has proved salutary, in not only mitigating fits of the gout, but some say of totally preventing their return. Indeed if we consider the action of sulphur on the habit, we shall not be averse to think favourably of its use.

Dr. CULLEN says, “It is certainly a mild and safe cathartic, never producing any considerable evacuation, but keeping up the natural excretion by the intestines, without any irritating or heating effect.”—And Dr. LEWIS—“That pure sulphur, in doses of from ten grains to a dram or more, gently loosens the belly, and promotes perspiration; it seems to pass through the whole habit and manifestly transpires through the skin, as appears from the sulphureous smell of those who have taken it, and silver being stained in their pockets to a blackish hue, as by the vapour of sulphureous solutions.”

But we must observe in this, as in every other constitution, we must be directed in our specific course by the particular nature of the habit, according as it tends to one or the other, which we have before specified. Hence in this case we must sometimes enforce an abstemious regimen altogether from animal food—
some-

sometimes allow its moderate use, proportioning the degrees of exercise to the degrees of tone, or strength of the system, always prohibiting the use of wines and other fermented liquors, except in cases of great debility, or long habit; and preserving the strength of the stomach and digestive organs.

2d. RHEUMATIC.—In these, the same rules will hold good as in the former, and not be attended with dissimilar effects, and those very often more certain; for it has sometimes been prevented by wearing a flannel shirt, which keeps up an increased degree of insensible perspiration, and using the cold bath or sea-bathing without interruption.

3d. That disease, which in inland countries we seldom or never see affect the natives, called the PUTRID SCURVY—by exercise, warm cloathing, drinking acescent wines, and living chiefly on fresh vegetables, or eating freely of them, will be prevented. It generally affects those who live on sea-coasts, and feed on fish, and sailors:—hence sour crout has been considered as preventive. I have heard captains of some ships say, great benefit has been derived from vinegar, and they give it the preference to lemon or lime juice—why, I know not, unless from the saccharine substance in vinegar, a degree of fermentation takes place, and affords some portion of fixable air, from whence possibly some antiputrescent effects may be produced.

4th. Where we have reason to fear a *scrophulous* taint, or the seeds of that disease called the *king's evil* predominate in the habit—those means exerted, which give strength to the solids, begun in time, bid fair to act as preventive in this case; at least hinder the offensive matter from producing its unhappy effects in a violent degree.

Living in a free country air, particularly on the sea-coast, taking exercise and nutritious diet; moderate use of wine and a course of gentle chalybeates, or drinking the chalybeate waters once or twice a year, might answer the intention.

5th. Where there is a redundancy of bile, or a collection, those constitutions, we have said, are called *bilious*, and have often a bitter taste in the mouth. The stomach and bowels of such should be always kept clear, by taking aperient medicines every now and then, and such as are not likely to leave the body costive after the operation. In these habits, aloes and soap are useful, castor oil, saline purgatives—as Glauber or Epsom salt, or the natural purging waters—as those of Thorp-Arch—Northaw—Colchester—Dulwich—Epsom—Aldon—and Cheltenham --- Fat and oily substances should be sparingly, if at all thrown into the habit. Exercise should be persisted in, and some species of

vegetable food preferred to any other, as the dandelion—endive—and such like.

6th. The stomach and bowels are apt to be loaded with different kinds of noxious materials, called *suburra*—and these are either *acid*, *rancid*, or *viscid*. In all constitutions that have one or more of these particular tendencies, they generally arise from weak, digestive powers. Emetics and purgatives are now and then to be prescribed on that account, and those things which give force to the weakened organ.

If the *acid* is most prevalent, which will discover itself by sour belchings and heart-burn—animal diet is most proper; crude vegetables, milk, butter, and other oleaginous substances should be foreborn, and also fermented liquors; the most proper drink is water alone, or warmed with a little ardent spirits, or having ginger infused in it—stomachic bitters with elixir of vitriol, or bark; absorbent powders, as hartshorn burnt and prepared, chalk, magnesia, are useful for immediate relief. In all relaxations of the stomach we must aim at strengthening its tone, preventing fermentation, and promoting the expulsion of its contents;—the alkaline waters, as those of Upminster, Brentwood, Seltzer, and Tilbury, may be recommended.

If the eructations should be *rancid*, or occasion a *putrid, offensive taste*, called *nidorous*, like that of bad eggs, and nausea attend, with the throwing up of liquids, that will blaze in the fire like oil; a diet containing a large proportion of acescent vegetables will be proper, with a very sparing quantity of butter and oil—made dishes should not be allowed, nor rich sauces, or much gravy—acid fruit, such as are ripe may be indulged in, and water is generally the properest liquor to drink.

But if the matter should be *viscid* and *ropy*, that is there generated—such things as will assist in dividing in carrying it off, are the most eligible—as calomel and rhubarb occasionally, or aloetic purges—elixir proprietatis with bitters, or pilulæ Russi with Venice soap—exercise, chiefly riding, is necessary, and all things which have in their own nature too tenacious a viscosity, such as puddings, thick gruels, potatoes, should be avoided—the flesh or juices of older animals are preferable to those of the younger sort—and also vegetables of the warmer class, mustard, horse radish, water cresses, &c.

And in all cases where the digestive powers are too languid, where there is not too great an acrimony of the humors, and the habit is not liable to be heated from slight causes;—chalybeate waters, such as Pyrmont—Gunbridge---Hampstead---Islington,---and the sulphureous, as Buxton---Bath---Aix-la-Chapelle---
Harrow-

Harrowgate---and Llandridod, will always promote some good purpose in this respect, without being in others detrimental.

But sometimes the lungs will be subject to be loaded with viscid, tough kind of phlegm, in order to prevent which, the mode above laid down will be highly conducive, and what will contribute much towards being more successful---are emetics taken occasionally.

§. 3. Besides what we have above described, there are fluids which get into the habit from contagion or infection, and will produce disease by the action of their morbid matter, if not prevented, before they have manifested their effect---and these we call

ACCIDENTAL.—The **FIRST** of which we shall take notice of, is that creative of the *lue venerea*—or *pox* ; and where there is strong suspicion of having had commerce with an infected object, the malady may be prevented by such applications, as will wash off all the natural mucus of the parts, and thereby carry away the virus, or venereal poison, which lies entangled in it : and these are solutions of the caustic alkali ; soft or common soap, corrosive sublimate, &c. in water, with which the external parts should be well washed, as soon as may be after coition, at least within the space of six or eight hours ; and some should be injected within the urethra ; but great care should be taken not to make the solution too strong, lest the parts should be excoriated, and inflammation brought on by that means, with its painful and disagreeable consequences. It will be sufficient if the solution is of such a strength only, as will give a slight sensation of pungency on the tongue or inside of the lips.

The **SECOND**—the *poison of the viper*.—The ill consequences generally attending the bite of vipers, by which means they pour their virus into the wound, and so communicate it to the habit, have been prevented, it has been asserted, by the immediate application of the fat of that reptile to the wounded part.—It was, in the more early periods, considered as a specific in that case—but olive oil has been known to answer the purpose full as effectually.—These means may also be useful in abating the pain originating from the stings of *wasps*.--*bees*---*bugs*---*gnats*---or preventing the effects from burns, or scalds, before the skin is raised into blisters ; but the more effectual modes are the immediate application of spirits of hartshorn, or of sal ammoniac, or spirit of wine, and continued some time.

The **THIRD**.—The *saliva of a mad dog, or another mad animal*. communicated by a bite, gives rise to the most dreadful of all human calamities ; and its effects, if not prevented, generally terminate fatally : but these have been said to be warded off, by
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using the cold bath, and persevering for some time in taking the PULVIS ANTILYSSUS,* a dram and a half of which was to be taken in half a pint of cow's milk in the morning, on an empty stomach, for four mornings together, and occasionally persisted in, so much recommended by Dr. Mead—or applying to the Ormskirk medicine; but these have so repeatedly failed, that I should not depend upon them—but where people are strongly wedded in opinion to these compositions, I should advise their administration—but not till after the following mode had been completed:—Immediately after the wound was given, I would advise it to be sucked some time, which may be done with the greatest safety, the mouth of the operator being guarded with oil, for his satisfaction, and the saliva not swallowed; then the part, where it can, should be cut out, or burnt with a hot iron, deeper, and more extended than the wound itself;—after which, the wound should be filled with mercurial ointment, and a blister applied over the part—kept open for some time—and mercury thrown into the habit, so as to raise, and maintain a salivation, for some weeks. For by these means, the poison will be prevented getting into the habit; and should a portion of it have made its way inwards, by the quick action of the absorbent vessels, it might be thrown out, by quickly and constantly promoting salivary secretions and excretion.

The FOURTH—The *noxious particles, which by infection occasion malignant ulcers of the throat, putrid fevers, or dysentery*—and which are generally ushered in with shiverings, sickness, and sudden loss of strength, have had all their consequent mischiefs prevented, by the instantaneous exhibition of emetics; and should these fail, so that the whole symptoms do not immediately go off, a large blister applied between the shoulders has commonly removed them. Nurses, in the naval hospitals, have, it is said, from the most undoubted authority, by this mode prevented mischief.

The FIFTH, and LAST of which I shall take notice in this place, are the *putrid particles, apt to be taken into the habit, by persons wounding themselves by dissecting of putrid bodies, or parts mortified*—and of which many instances have recently occurred, where the unfortunate, though praise-worthy, curious inquirers, have fallen sacrifices to the deleterious effects.

In cases where, under these circumstances, wounds occur, I should recommend sucking the part immediately, and having it well washed with vinegar; then the application of strong mercurial ointment, and mercurial purges, taken occasionally at proper intervals; for I know of no medicines which so effectually clear the

* See p. 57,--169. Lewis's New Dispensatory, 8vo. Edinb. 1786.

the serous, and lymphatic system as mercury.—And in the intermediate days a course of antiputrescent medicines and diet should be persisted in—as bark—moderate quantities of wine—or vinous liquors—and vegetable diet—and bark may be very judiciously united with such other materials as promote perspiration, and these should be insisted on, and persevered in for some time, and I have little doubt but they would prove a security from future danger.

Having now delivered fully what may be thought necessary for understanding the nature of constitutions in their simple, and mixed general state, and also peculiar, with the modes necessary to be pursued, in keeping them in an healthful state, or of preventing diseases, as far as respect these particular points; we would observe to the young practitioners, or those who thirst after medical information, or love to engage in practice from motives of philanthropy, where medical advice may be far distant, that the eye should not only be carried to these constitutional points in cases where prevention of diseases is studied, but particular attention should be paid to them in diseases, wherein they will be found altered from their natural state, and some different combinations taking place from the effects of the malady itself; which deviations, when discovered, should regulate the conduct; and it will be perceived that medicines highly proper in the beginning of a complaint, are as improper in the conclusion, and so on the contrary, and this alone owing to the alteration made in the habit: for instance, in inflammatory remittent fever, where at the onset, the constitution is possessed of great firmness—strong vascular irritability—and equable nervous incitability—to give bark would be madness, little less than butchery, because it would too much increase the already too heightened powers, and occasion the worst consequences; but at the latter end, or during the progress in its later stage, the same is a cure, owing to the constitution being altered by the violence of the disease at this time; for it loses its firmness—increases vascular weakness—and induces too great nervous incitability, all which are conquered by bark augmenting the tone of the system. But as we have examined particular constitutions in an healthful state, and pointed out their variability, and spoken of some points necessary to be observed in our conduct, in order to preserve them in that state, we shall now make the application on a more extensive scale.

SECTION V.

NECESSARY CAUTIONS *respecting* FOOD, EXERCISE, &c.

WHEN men are in a state of perfect health, the moving powers of the constitution act in unison with each other, the force of one being in exact proportion with that of another, so that they perform their functions with ease and regularity---neither exercising themselves superabundantly nor defectively; the machine is lively and active---the thinking faculty alert and clear---the blood and humours are bland, moderate in quantity, and free from acrimony, which may be distressing---the appetite is good---the digestion sufficiently strong---all the secretions and excretions performed in due order---sleep sound, and refreshing---and no perceptible defect manifests itself in any of the vital, animal, or natural actions; and this situation of the machine is the greatest blessing human wishes can desire, and empowers man to enjoy every pleasure of moderation and propriety, within his reach, with the greatest zest and inward satisfaction. But unfortunately, men under these circumstances often plunge themselves into the opposite extremes, by imprudencies and indulgencies; for it must be observed, that the most perfect state of health is not far distant from disease, and very often trifling indiscretions lay the foundation for great mischief, if the consequences occurring from thence are not soon put a stop to; which, indeed, by a little care and attention, might frequently be prevented;---certain rules for which we shall endeavour to point out, which one would scarce think necessary, if we consider the latitude given by CELSUS, to those in health, did not experience every day convince us, that the documents he lays down require some restrictions.—He says, “A man, who is healthful, and at his own disposal, ought not to be confined to any particular regimen; as he wants not the advice of a physician, his mode of life should be varied;—he should sometimes reside in the country, sometimes in cities, but oftener in the former;—he should now and then sail, hunt, or live at ease, in perfect rest;—he should use sometimes the warm bath, sometimes the cold;—eat, in common, all kinds of food;—sometimes be in company, and feast himself; sometimes live retired, and abstemiously; *now and then take more or less nutriment than might be exactly proper*; but refresh himself rather twice with diet, than once a day, and *that in a plentiful portion, if it can be concocted*;---but though exercise and food in this mode are necessary, in moderation

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“ nate degrees they are not serviceable ; for business, preventing
 “ the exercise, which may happen on account of attendance in
 “ various avocations, the body will be injured, as those which
 “ receive nourishment in their usual way, will quickly decay
 “ and become disordered.”

Though this latitude is given, we must observe it is only to a man in full vigour of health ; but even here, during the state of allowed indulgence, some caution becomes necessary, especially against every species of excess ; for it is a known and allowed truth, that excess of every kind, whether corporeal or mental, disorders the human frame, and lays the foundation for a variety of complaints ; even in those things, a moderate share of which is necessary for the support of our machines—conduces to invigorate our mental powers, and promote our pleasure.

In *eating* and *drinking*, this is an obvious truth, though in the latter it is much safer to exceed than the former ; in proof of which, let us examine them.

We find that by drinking a quantity of vinous and spirituous liquor, in which all those which cause inebriation are included ; the vital principles, or that which supports life, and renders the machine active, is rendered extremely powerful by the stimulus applied partially to the stomach, or more diffusively ; the spirits are elevated, sometimes even to madness ; a more than common stress is laid upon the constitution ; the habit becomes fuller so long as this stimulus continues, and liquor is poured into the stomach ; which stimulus ceasing from constitutional fatigue, the system feels too much loaded and enervated ; the stomach relaxed, and all the vital powers incapacitated to perform their functions properly : hence pain, sickness, head-ach, languor, or a temporary fever, perhaps after a debauch, the whole, or most part of these inconveniencies are experienced.

To remedy which, lying in bed and plentiful dilation with watery liquors—as weak tea—small broth—thin gruel, &c. should be persisted in, to promote perspiration ; or recourse should be had to riding on horseback, by which means the superabundant load will be carried off, and the body restored to its proper tone. Either of these methods may be pursued, as is most agreeable to the constitution : the former I should recommend to plethoric habits, and those of a strong stamina ; the latter to the more relaxed whose stomach is generally in a weaker state. Sometimes taking plentifully of the following :—One dram and a half of salt of tartar, called now prepared kali—four table spoonfuls or five of lemon juice—water which has been boiled, half a pint—brandy three or four table spoonfuls, and this sweetened with sugar : or if the stomach is very weak, a dram and a half of aromatic

matic confection, or two table spoonfuls of tincture of bark may be added;—a tea cup or more of which may be taken often in the day:—or what is better, the salt of tartar may be dissolved in the liquid, without the lemon juice; and after every six spoonfuls drank, let a table spoonful of lemon juice be taken, and this repeated in the same manner;—or some warm and grateful cordial, as rassa—usquebaugh—brandy, mixed with peppermint water, may be administered, which will give immediate relief to those whose stomach is affected with nausea, sickness, or oppression, a common practice with men devoted to liquor; but this should be had recourse to only on very particular occasions, for it is a custom may be attended with disagreeable consequences, if too frequently used, because the stomach, once accustomed to any particular stimulus, requires the constant repetition of that stimulus, which, in time, destroys its tone, and lays the foundation for those maladies which arise from inebriation; and it is this which often induce men to turn drunkards: low spirited women, frequently from taking things of this sort to exhilarate their spirits, are converted into shameless sots, and become the disgrace of their own sex, and contempt of ours. However, this furnishes one proof of the power which the stomach contains over the system in general; as by the stomach being stimulated, all that lassitude—languor—nausea—sickness—and every uneasy sensation attendant on its relaxation, are removed, except heat.

By excess in eating, the stomach is apt to be over-distended—the digestive powers weakened—the vessels filled with crude chyle—respiration retarded; hence a sense of weight at the stomach—pain and flatulence—propensity to sleep—inactivity, and fullness of the head—obstructed viscera—jaundice—dropsy—asthma—apoplexy—and a number of chronic complaints, if the practice is continued.

But if an error has been committed, and especially if that has been with high seasoned dishes, a draught of cold water, acidulated with elixir of vitriol, taken soon after eating, will relieve the stomach from that weight with which it is often oppressed, assist digestion, restrain fermentation, and prevent flatulency; from hence, perhaps, the use of ices may be approved.

I remember an account given me of a dignified clergyman, who was so great a slave to his appetite, that he was obliged constantly to have recourse to some application to prevent indigestion, he gormandized so abominably; as a proof of his gluttony, I cannot give it a gentler term, the following is recited of him: He was invited to dinner, where every rarity the place afforded, was provided, of which he eat in his usual manner; but the gentleman, with whom he dined, knowing he was extremely fond
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of venison, and being well acquainted with his disposition, reserved the haunch in succession, of which he had advertised the rest of the company; on its appearance, the already satiated divine, after expressing his surprise at not being informed of this luxury before, retreated into the yard, disgorged the load he had before swallowed, and returned to the attack of the venison, with his accustomed vigor and prowess, to the astonishment of his companions. Hence we may infer, vomits in many cases are also serviceable; however, at an early period, he became the victim of disease, and died of a dropsy, succeeding an irremediable jaundice, brought on from this course of living.

With regard to our food, however, in quantity and quality, it should be properly proportioned to our exercise. The farmer, who follows his plow, and is perpetually toiling from morning till night, could not exist on food appropriated to those who pursue not the severer exercise of the body; his diet must be of the coarser kind, such as old milk cheese, salted meats, bread made of rye, potatoes, &c. &c. and these in pretty large quantities. This food answers to him the purposes of nature, keeps his body in a state of health, because his digestive powers are very active, and form from these materials good chyle, on account of the occupation in which he is engaged; which in the more delicate and less laborious, or indolent, would occasion great indisposition. In Herefordshire, and some other counties, men are not allowed fit for service, nor get hired, without, as it is termed, they can bolt bacon; that is, swallow it unmasticated, cut into pieces, about an inch and an half, or two inches long, and half an inch square, or thereabouts, and this in tolerable quantities; and this is done in order that they may attend closely to their labour, without spending any time in taking in nourishment for their necessary support; for bacon being fat, and of a firm texture, from being hardened by salt in its curing, will lie a long time in an undigested state, by which means the cravings of the appetite are kept off, and the strength supported.

But should abstinence be unavoidable, a man, during that period, should not undertake any laborious employment; as in that case, the consumption of the thinner fluids would be too great, the solids would be rendered weak for want of proper support, and the liquids disposed either to form concretions, that is, degenerate into too thick masses, or run into a state of putrescent acrimony.

There is one custom to which the generality of mankind are apt to be addicted; when they have suffered fatigue, and that perhaps severe, from hunting, shooting, cricket playing, walking, &c. they commonly indulge their appetites by eating copiously

of solid food : and think it one of the benefits from thence arising, that they are enabled to throw down such a load of gross materials ; nay, not content with this, they make them float in porter, ale, or some other viscid liquor, and afterwards indulge themselves with a jolly bottle ; and this they think supported by reason, for where the machine is weakened, it seems natural to suppose it requires much refreshment. If we examine the effects of such indiscreet conduct, we cannot hesitate to pronounce it erroneous, and condemn the practice : for after eating and drinking in this manner, they grow dull and heavy ; and general lassitude comes on ; the pulse grows quick : the face flushes, a temporary fever succeeds ; sleep is disturbed ; profuse sweats break out, or a too great general heat, with dryness of the skin, is perceptible ; the mouth is clammy ; thirst is an attendant, and they rise in the morning weary, and afflicted with pain, or stiffness in the joints : wanting that alacrity and activity they ought to possess, from the night's indulgence. Indeed, oftentimes a foundation is laid for infinitely more serious complaints, according to the peculiar nature of the fever ; nay, sometimes immediately brought on, such as inflammatory or slow fevers, local inflammations, rheumatism, &c. Nor can it be otherwise, for all the vital, natural, and animal powers are weakened, and a load laid on nature in her debilitated state, for her to conquer, before the vascular system has recovered its strength sufficiently for the performance of such an office.

Were they to confine themselves to liquid food, or that sort readily digestible, such as weak broth, milk, light bread pudding, &c. with wine and water for their beverage, all these inconveniencies would be prevented ; the body would only receive that nutriment it could readily digest, and the vessels from not being over distended, and their actions too powerfully solicited by a constant stimulus, soon recover, by rest, their natural elasticity ; then with impunity might they pursue their festive joy.

It is also prejudicial after suffering severe hunger, to eat immoderately—or after a full and constant feeding, to fast absolutely. Neither is running into the extremes of rest and labour successively, by any means attended with safety.

The constitution may be brought to bear many alterations, but these must be accomplished in a gradual manner, for few of any consequence happen, but they occasion an alteration in some of the solids of the system, producing either a greater degree of extension or contraction---consequently also a change is created in the fluids : and if any defect should happen in one part, from the mode of producing those changes, nature provides against such defect by adapting some other parts to the performance of
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their duty, in a greater or a less degree, or a duty that is not naturally intended for them; as we see in the decrease of one evacuation, it often promotes the increase of another: and vessels appropriated to the discharge of one fluid, will often emit another, as in cases of obstructed menses, where blood has issued periodically from the eyes and lungs; so that all sudden changes may be productive of a variety of complaints, not only on account of the parts being unaccustomed to perform their proper offices, and from want of use being rendered too weak, but want of time for nature to make suitable dispositions, to alleviate distress arising from sudden contingencies.

Therefore, if a man has laboured under severe hunger, his stomach will be in a state of contractility, lessened in its capacity more than usual; loading it consequently too heavily, will either occasion vomiting, or uneasy sensation of weight: heart-burn, perhaps inflammation, or a spasm of both the orifices, or either of them—or mischief might be created in other parts of the machine, from filling the vessels, which must also be in too contractile a state, too full of crude ill formed chyle; for in this situation, neither the peculiar juices of the liver—sweet-bread—nor those of the stomach itself, can be separated in their proper quantity, nor will be endowed with their natural qualities, sufficiently perfected for the business of digestion—all which are absolutely necessary for forming the nutritious fluid in a salutary state.

And what on the contrary will happen, if a man, after full feeding, filling the habit copiously and constantly with liquids, should submit to absolute fasting?

As it is necessary to keep up a plenitude in the vessels, that the fluids may preserve their power of reaction, as a stimulus assisting powerfully the promotion of vascular contraction, and thus maintaining an easy and equable circulation, we from time to time throw in food to supply the defect of the fluids, which arises from the constant and natural action of the vessels; and this not only constitutes a requisite equilibrium, or necessary equality in the powers of the circulatory system, but also supports a continuance of pressure upon the brain, which is very material for the performance of its duty in the body; since we find in proportion as that organ is deprived of that pressure, it performs not its functions regularly—hence convulsions—faintings—death; and we also find the more plethoric a man is in a state of health, generally the more warmth he has in his habit.

Now if a man is filled with fluids from eating and drinking inordinately, the constitution will act under the impulse of increased stimulus.

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Sudden and total abstinence therefore would prevent the regularity of the brain's action, and render the system languid from withdrawing the stimulus, by which it had been actuated—the vessels would collapse—circulation would be carried on with difficulty—the heart oppressed---and in the first instance, sanguinary concretions might be formed. But should the cause be permanent, the humors, for want of fresh supply of new fluids, would grow sharp and acrimonious---general irritation take place---a fever ensue---an inflammation of the brain come on---and a delirium close the scene.

Having examined the effects produced by severe hunger, and gratification of the appetite copiously and constantly, and suddenly changing from one to the other; let us now examine the consequences of the extremes of rest and labour, succeeding each other in the same manner.

And first---What will be the result if total rest should succeed hard labour?

The constitution being habituated by custom to any particular practices, especially where the motion of the solids are principally concerned, is so used to the impressions made by those practices, that they become necessary to its welfare. Hence a man accustomed to hard labour, enjoys a better state of health, under that circumstance, than if he was to fall entirely into habits of indolence; for the system being divested of those particular impulses, usual to be given, would experience a degree of torpor, or sluggishness---the fluids constantly increased to supply the dispendium or consumption, having no occasion to be appropriated to that purpose, would form collections in the vascular, glandular, and cellular system---and hence would arise a variety of complaints from fullness, and corpulency---and a foundation be laid for numberless chronic disorders.

And we may observe many men, retiring from avocations which require bodily activity into the arms of idleness, though possessing their health under former situations, plunge into disease-- and numbers of them die apoplectic---paralytic---asthmatic---or dropsical.

But, on the contrary, if men apply to hard labour suddenly, from a state of absolute rest---the constitution will become languid, from want of proper support, and be affected with different kinds of consumptions, not of the lungs particularly, but gradual wasting away---dropsies---fevers, &c.---for the vessels not having been solicited to strong action, and the fluids, though abundant in quantity, not properly elaborated to repair the loss severe exercise occasions, the former will be weakened by a sudden increase of action, and want of adequate supplies;---while
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the latter may form congestions in the head, or internal parts, by being pushed suddenly forward, and too violently, and soon acquire a dangerous and noxious acrimony from crudity, or deficiency.

But though extremes in these particulars are highly injudicious, becoming the prolific parents of many maladies, yet pursued under proper limitations, are replete with innumerable advantages---for exercise and rest are the certain supporters of a pleasurable life, as far as it depends on general health---Hence must we allow every species of the former very beneficial---but then it must be limited by the strength---for when in proper proportion it gives constitutional vigour, and muscular firmness---while inaction renders the body listless, and relaxed---and, indeed, if exercise is pursued to the distress of the natural powers, it creates a number of injuries, which its judicious use would inevitably prevent.

Besides we must observe, that all exercise, of whatever nature, whether walking---running---fencing---riding on horseback---or in a carriage---playing at cricket, tennis, &c. should be adapted to the prevention of any disease the person so using it may have a tendency to fall into---to those liable to fall into *gravelly complaints* riding on horseback should be recommended ;---to have *collections of phlegm upon the lungs*, reading aloud---singing ;---those *subject to the gout*, walking ;---*indigestion, or visceral obstructions*, riding ; *subject to catch cold*, walking ;---those of strong muscular stamina, having a *sluggish circulation and coldness*, playing at cricket or tennis ;---to *hysterical diseases, or melancholic affections*, where the mind broods too much over imaginary calamities---driving a carriage---shooting---hunting, or some, where their reflection may be withdrawn from unpleasant objects, &c.---and those exercises which are more or less violent, should be advised according to the ends we wish to promote ;---for the grand business of these are to increase the tone of the solids---make the different glands perform their functions ; promote insensible perspiration ; and prevent the fluids from becoming detrimental to either by their thinness, visciditv, or acrimony.

Exercise may be divided into these three degrees--the STRONGEST of which are,

First---Playing at tennis, cricket, fencing, and running, &c. where great muscular exertions is necessary.

Second---Walking, reading aloud, riding on horseback, or in a carriage :

Last---Sailing, chamber-horse, dumb-bells, and frictions : which last are appropriated to old age, where muscular force begins to grow effete ; and are necessary for the preservation of health,

health, by promoting the circulation of the blood, and motion of the fluids, through the minute vessels.

But *sleep* is esteemed the grand preserver and restorer of health, such as is well-timed, and properly proportioned; for some constitutions require much more than others.---It is one thing the most essentially necessary to life, as this is the time when the system is freed from all incumbrances, undisturbed by mental reflections, which often disorder the animal economy, and prevent the human frame from acting, through all her departments; with equality. and full force, in which the nutritious particles, properly perfected by the operation of the constitution, or chiefly applied to repair the waste, and replace those which have been abraded, and washed off by the labor and exercise of the day.

Thus situated, the moving and assimilating powers of the body have only that business by which the parts are renewed to perform, and the vessels are properly disposed to receive such additions as are required, and co-operate to that end; but if the machine is too much indulged in this particular, it becomes much disposed to be corpulent, languid, and weak, and feel a number of inconveniencies from thence arising.

With regard to the time necessary for the producing the good effects it is various in different constitutions: six or seven hours rest is sufficient for many adult constitutions, though some require nine or twelve.---A lady, whom I attended, of a relaxed and delicate habit, subject to hysteric affections, and an acrimonious state of humors, though by no means indolently disposed, was advised to rise early, and gradually lessen the time she used to devote to her bed, which was constantly twelve hours, and which was supposed to contribute much to the relaxation of her habit ---she made the attempt for some time, but could never enjoy so comfortable a state of health, as when she indulged herself in her usual custom.

Still in many this indulgence enervates the system---renders them hypochondriacal and hysterical---relaxes the solids---disposes the humors to be viscid, or acrimonious---blunts the vital powers---and brings on a diseased, and early old age.

But, notwithstanding, we will allow that nature herself requires, in different constitutions, such variability;---the custom of sleeping long, and indulging in bed, is very frequently the result of indolence, early induced, and long encouraged:---such a disgraceful waste of time should be discountenanced, and the habit conquered, which may always be accomplished, in the early and middle part of life, where it arises not from constitutional necessity, naturally implanted; but it must be done by slow degrees, for all extremes of change are detrimental.

It is the practice of numbers to indulge themselves in sleeping in the day-time ; some immediately after dinner—still, notwithstanding what has been advanced by some authors, that sleep is useful even at those times, as it promotes digestion, I think the rule, very often, more salutary in the breach than the conformity ; for it creates giddiness and languor, especially in those addicted to study—deadens their thinking faculties, destroys perspicuity, and clouds the imagination ; but if no such effects are perceived, and people find themselves recruited, alert, and active, it may be allowed.

In proportion as the powers of digestion are more or less strong in different ages, with respect to DIET, they have claimed different kinds.

To the younger class of subjects, and children, therefore, viands of the milder, and softer sort, are considered as the most proper, as being more readily assimilated.

To grown persons; those which are more substantial and solid—and

For old people; it has been thought advisable to retrench of their solid, take that nourishment which is more fluid, and increase rather in drinking ; because they not only digest less freely, but the machine approaches more to dryness, from a deficiency in their juices.

Were the regulations here laid down observed with tolerable attention, and those adverted to which have been spoken of, when treating of the Non-naturals, adapting them to the peculiar circumstances of different constitutions, a plan may be formed by every individual sufficient to contribute towards the continuance of health ; nay, be fully adequate to insure its preservation, if closely pursued.

These rules, though, are calculated for those who are arrived at the years of maturity, or at such a time of life, that they may become subject to the directions of others, who have made these things their study, and have from thence acquired a competent knowledge.

But before we conclude this part of our work, it seems proper to take notice of what is necessary to be done in the infantile state, in order to promote for our offspring, in their tender years, the same benefits—and this leads us to consider the good or evil consequences of proper or injudicious Nursing, which we shall make the subject of our next Section.

SECTION VI.

ON NURSING.

IF we look into and examine the bills of mortality, to be informed at what ages the greatest number of people die, we shall find that half of them go off under the age of five years :—to what are we to attribute this? That nature is defective in her operations, and that half of mankind are born in so imperfect a state, formed of materials so bad, or so defectively united, that they cannot support the operations necessary for the continuance of their existence any longer? Or are we to conclude that in that period they are subject to more fatal maladies, and die the victims of disease in greater proportion than at any other time? Were such conclusions to be formed, we should be accusing the Omnipotence of Providence, or arraigning the principal Agent of Heaven, NATURE, of executing her office wantonly, or improvidently. This, then, cannot be the case; for if we look through the vegetable or mineral kingdom, we shall never find that any of their productions are subject to be destroyed, merely because they are in a state of primary existence—or in the brute creation, because they are young. When destruction happens to them, it is from being placed in such situations, and under such circumstances, as are not congenial with their peculiar nature:—so happens it, I have no doubt, with the human species that this mortality in the infantile state is owing to bad nursing, where, by these means, the operations of the constitution are impeded, or perverted from the indolence, ignorance, or superstition of those allotted to rear the infant in its tenderer years—and it is astonishing, that, in a business requiring the utmost simplicity for its success, so many, and such great errors should be committed, as to become too certainly, and too commonly fatal, particularly in children born of delicate, and weakly parents; who, partaking of their constitutions, are liable to be severely afflicted from indiscreet management, and want strength to struggle through calamities originating from that source.

Let us cast our eye amongst the hardy sons of the rustic race—compare those with the offspring of the more refined and polished—what a difference in appearance! Amongst the former, we find the children firm, robust, lively, healthful, active, and strong; amongst the latter, weak, puny, relaxed, and sickly. Amongst
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the former few die, but from the accession of unavoidable illness, as measles, small-pox, chin-cough, dentition, &c. Among the latter numberless expire from gripes, loosenesses, hectic fevers, worms and convulsions.

But there are greater evils than dissolution in this state from this cause; for from hence disease itself is generated, and so fixed in the habit, that the life of many is oftentimes one continued scene of misery;—nay, I have no doubt but, from this source, the temper and disposition acquire so fretful a cast, and oftentimes is so soured, and rendered so petulant and peevish, that, whilst they do exist, they continue unhappy and miserable in themselves, as well as troublesome and offensive to their attendants and their associates; for it has been allowed, that the faculties of the mind, very often depend upon the organs of the body; for when these are in a tolerable perfect state, so as to perform their separate functions properly, the thinking part is more alert, active, and cheerful; and good-humour the consequence of such freedom—whilst the contrary effects are produced, when the organs are disturbed, or diseased. To avoid, then, which disagreeable effects, it is our business to lay down such regulations as are founded on rational principles, supported by experience, and which consist in bringing up children in a plain and simple manner, the mode most consonant with nature; and if we observe the method she invariably pursues, we shall find that she delights in simplicity alone. View but the brute creation, and those of the feathered race—see what occurs in them; examine what method they, rearing their young, instinctively adopt, and mark their success; cleanliness, proper feeding and exercise, comprehend in these the infinite wisdom of her laws: and if we add judicious cloathing, so should they that of the human species.

As soon as quadrupeds bring forth their young, the first care of the mother is properly to clean them, and keep them perfectly warm, till all the moisture is exhaled from the surface of the body; so happens it with birds: after which the young sleep for some time—almost constantly for the first few days; in brutes, supported by the mother's milk alone, which is ready in the breast at an early period, the young soon walk, and become playful and sportive, by which means they procure to themselves sufficient exercise, and in this manner are brought up with ease and certainty: with respect to cleanliness, the feathered race do the same, never leaving their young after they are hatched, till they are perfectly clean and dry; the mother, as soon as the egg is freed from the young, placing it under her in the warmest part; but as they are divested of milk, in order to nourish them, if of the granivorous kind, she endeavours to render their nutri-

ment the most easily digestible, and as nearly fluid as possible, by picking up grain, macerating for some time in her stomach, and then throwing it up into the mouths of her young, who, whilst feeding, flutter their wings, and agitate their whole bodies in a surprising manner, which serves as a species of exercise, and this universally prevails in all such as lay in the nest some time before they can use exercise by flight, or running about, and feeding themselves.

In raising up our young, we therefore cannot do better than imitate these laws, so universally prevalent, of which we shall take a general survey;—which consist in,

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| 1. Cleanliness, | 3. Exercise, |
| 2. Cloathing, | 4. Food, |

under which all will be included necessary for the proper conduct of those who make nursing their particular business, or undertake that office from necessity or inclination.—And first we must observe,

That numbers of children, as soon as they are born, are covered with a mucus, or white fordes, which ought to be washed off with soap and water; but should it be very adhesive, there is no necessity of rubbing the infant severely at first, for on the second dressing, if any remains, it will readily come off; and long continued or violent friction is apt to create uneasiness, subject the child to catch cold, and produce inflammation; and as cold, at this very early period, occasions several disagreeable consequences, particularly sore eyes—cough—stuffing at the breast—gripes—looseness—or stoppage in the nose, at the birth, it should be wrapped up in a flannel receiver, lined with fine old linen, and kept from the contact of the cold air, for a quarter or half an hour, before it is cleaned, and this should be performed before the fire; indeed, before the infant is taken from the mother, it will be prudent to cover the eyes by a soft linen bandage, and fasten it at the back part of the head. As soon as the child is cleaned, and well dried, the naval string should be carefully folded up in a piece of scorched rag, in two or three folds; for this not only prevents the infant from running the risque of being griped by the coldness of the naval string, but absorbs the offensive liquid which is generated by its running into a corrupt state.

It is the custom next for nurses to rub the child's head extremely well with their hand after washing, and apply brandy or some ardent spirits at the same time, and then forcibly press the head in different directions, under the notion of aiding in joining the bones, where the sutures are open, a contrivance of nature, apparently that in labour the dimensions of the head may be

be lessened by the different bones riding one over the other, and delivery, by these means, be facilitated ; after which the child's head is tight bound up with a forehead cloth.

This over officiousness is highly detrimental and derogatory to the intent of nature ; for by pressing the head too forcibly, and keeping it in a confined state, prevents the proper circulation of the blood through the vessels of the brain, and brings on convulsions and other complaints from congestion ; and all this without in the least answering the intent for which this absurd custom is practised. For the bones join not by the edges of them coming in contact with each other, but from bony matter deposited in the cartilaginous and membranous substance of the cranium, and forming a junction in this way, and therefore the head should be left entirely to itself, after being well cleaned, without the labour has been very severe ; then sometimes the vertex will be greatly swelled by the long continuance of labour, occasioning great pressure upon the larger part of the head, and impeding the return of the fluids, by which the skin on the vertex of the cranium will be so loaded with fluids, as sometimes to produce a tumor, not inferior in size to a large egg, which may inflame and suppurate, as I have observed, particularly where imprudently managed.

Instead, therefore, of submitting the head to so severe friction, let it be bathed, where swelled, with brandy—arquabuse water—or some other ardent spirits ; or rags, three or four doubles, may be dipped in Goulard's saturnine water, mixed with about a fourth or fifth part brandy, and applied to the part affected ; and then the head should be covered with a loose flannel cap, over which may be placed a linen one, tied under the chin only just so tight as to keep it upon the head : and this operation may be repeated once a day till the swelling subsides, which will commonly be in the space of two or three days.

Under the idea of giving strength to the child's back, and enable it to support itself, it used to be the practice, and still continues in some country villages, to swathe or roll the child very tight round the abdomen, with a very broad roller ; by which means the circulation of the blood was impeded, the superior parts loaded, the peristaltic motion of the intestines, and the action of the abdominal muscles, hindered from properly performing their offices ; hence gripes—convulsions—coughs—and general uneasiness. Instead, therefore, of this roller, a short flannel petticoat, with a broad head should be tied round on the waist, only so tight, as that a finger will easily pass under it ; so that if the child's belly swells, as it sometimes will from flatulence, it may experience no uneasiness : and if after this a long linen
gown

gown is put on, the child will be sufficiently dressed, be perfectly easy, and no obstruction occur to prevent nature performing her proper operations. But there is another error frequently committed with respect to what they think necessary to give the infant internally ; therefore, as soon as it is dressed, they cram down its throat a large lump of butter and coarse sugar ; or give it oil of sweet almonds and syrup of violets : or should the infant lick its lips, it must be fed with pig, that is, it must be permitted to suck the fat of that animal, in order to appease, it is supposed, a sensation which arises from its mother's having longed for something or another during her pregnancy.

Were there nothing but the mere folly and absurdity to be considered as the result of this practice, it would not be necessary to say any thing to induce its forbearance ; but these things are pernicious, inasmuch as they mix with the meconium, or humor with which a child's bowels is naturally loaded, prevents its growing sufficiently acrid to produce its purgative effect, or sheath the bowels from feeling the effect, and thus produce many complaints which load, oppression, and distension of the intestinal canal are apt to bring on : for nature seems to intend this meconium to clear, at an early stage, the first passages of the *fordes* which have accumulated there. If, therefore, it is determined to give something to the infant, a little castor oil, and simple syrup, will be the best, because it answers the purpose intended by the meconium. For if we consider the state of the infant during labour—the effects of the meconium left to itself—the time before the mother acquires her milk, and that its property is at first aperient, we shall obviously see the reason, why nature preserves this regularity in soliciting a discharge of fluids through the *primæ viæ* ; and shew that if any thing is to be attempted, her plan ought to direct all our operations. For besides clearing the stomach and bowels of its contents, which, by continuance there, might produce disagreeable and dangerous effects, it seems intended to prevent the too free determination of blood towards the vessels of the brain, which might be in a weakened state from the severity of labour : for the brain very often suffers great compression from the bones of the head passing through the pelvis ; indeed it is often so great, that the bones will wrap considerably one over the other, and consequently the capacity of the cranium be much diminished ; by which means the blood will be prevented from passing into the exterior part of the brain, which is thrown into the head by the arteries appropriated for that purpose, consequently the internal vessels will receive a more than proper quantity, and by being too much distended, of course be weakened, and that in proportion to the continuance and violence

olence of such pressure; in order, therefore, to prevent the mischiefs which would arise from such debility, if continued, and the succeeding accumulation, I conceive nature very wisely constituted purging, that the vessels may recover their due tone; and that this is one principal reason, I am induced to believe, from the first of the mother's milk always having a purgative property.

But however, I think that the less any sort of these things are given the better. As soon, therefore, as the child is dressed, and the mother laid in a clean and comfortable situation, the child should be placed in bed by her, and both left to go to rest, which they will soon do, and sleep perhaps for six or seven hours, by which means they will be refreshed, and recover in a great degree the fatigue they have both undergone: then the mother should be fed with some thin broth, or weak wine gruel, and a little bread, or some such simple materials; and the child, if the mother intends to nurse it, set to the breast; notwithstanding what some authors have said to the contrary, under the idea, that as nature does not furnish any quantity of milk in the breast, till the expiration of three days or thereabouts, it is useless, and only teasing to the mother and child, to have it set to before. This I am perfectly persuaded though is erroneous, and often attended with disagreeable consequences, both to the mother and infant, disposing the former to febrile affections, and bringing on a milk fever, from pain created by distention of the vessels of the breast, and keeping the infant too long from that salutary food which nature has provided for it, and acts at first in a double capacity, as we have before specified; besides it supplies an opportunity for ignorant and over officious nurses to cram the children with a variety of dabs, and too viscid food; by which means a foundation is laid for a number of complaints, from loading and oppressing the alimentary canal, by such things as are unconquerable by the digestive powers of the infantile state; hence arise crudities, acidity, flatulence, and convulsions, which by a different management would be prevented. For by setting the child at an early period to the mother's breast, by the gentle stimulus on the nipple from sucking, the milk is solicited in a gradual manner into the breast—the vessels are made by degrees permeable—the infant receives it at first in small quantities, adequate to its wants and digestive powers—no superabundance of milk is collected, nor a sudden flow of it into the lactiferous tubes, by which distension, pain, and febrile affections to the mother are prevented; the child's stomach is not overloaded, nor too great a quantity of fluid thrown into the habit, which would be injurious to several parts of the machine, particularly
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the head—lungs—and liver—as the circulation of the blood is now altered from what it was before the birth, and consequently the vessels in those organs incapable to bear sudden and too free distension; for the parts of the human machine are always better enabled to suffer changes brought on in a gradual and temperate mode, than by such as operate in the contrary extreme: and this seems, in the case of which we are speaking, to be the intent of unerring nature; it is so perfectly rational, that the description alone carries along with it conviction. Indeed, I am so clearly convinced of the great utility and good consequences arising from the adoption of this method, both from reason and experience, that I universally recommend it to those who are capable and willing to suckle their own children; and in all healthy subjects, it is a practice which should on no account be dispensed with; for to me, there is little doubt but that the milk of the mother is better adapted to the constitution of her own offspring than of any other; besides the advantages attending the first, as much so, I think, as the natural soil is to any indigenous vegetable: nor do I stand single in this opinion; for many authors, who have written best on this subject, not only support the same doctrine, but think that the mother's milk is sufficient for the nourishment of the infant for the first twelve months, and recommend that, to that alone they should adhere.

Could we insure the health of the mother and child, I should not hesitate to enforce the custom; but as both are liable to fall into dispositions, which may either, on the one hand, render the milk improper, from its nutritious qualities being altered; or, on the other, from its increasing some complaint in the *primæ viæ*. I think, during the child's being nourished from the breast, it should be fed once or twice a day with the boat; that if any accident should render it absolutely necessary to wean the child, or take it for a time from the breast, no inconvenience may arise from such an alteration; for many children feed solely by the breast—take very ill to the boat: nay, some indeed are obliged to be supplied by the breast of a stranger, a circumstance often painful, and almost always disagreeable to the parents—and as a succedaneum for the mother's milk that of asses is the best, or artificial asses milk with a little bread, called tops and bottoms; or roll, or biscuit—not the common bread, for that has in its composition too much of alum, and may, in habits where there is a propensity to coltiveness, be particularly hurtful.

But as children are apt to have most of their complaints originate from acidities in the stomach and bowels, or to have such acidities very often as a distressing consequence, it would be right to use them to the taste of other viands; particularly weak veal
broth,

broth, or that of mutton; or beef tea, if they should have no disposition to febrile affections;—but, whatever the food, care should be taken never to overload the stomach, as is too commonly the custom; so much so, that often, in the day, they may be observed restless, uneasy, and sick, and relieved alone by frequently puking—a happy remedy against the mistaken humanity of over-fond mothers; for it is a common practice with them, and other nurses, as soon, or as often as a child cries, or appears fretful, to appease it by giving the breast, though it should, a few minutes before, have sucked to satiety. Instead of this, the child should be amused by dandling gently, or by some other means diverted: exercise however is the best, in proportion to its age. In the first months, such as is moderate, and of the gentler kind; afterwards, as its strength increases, so may the exercise; for this quickens circulation, augments perspiration, assists digestion, and helps to clear away visceral obstructions, and prevent costiveness. Indeed, in the early stage, it is useful, twice a day, when dressing and undressing the child, for the nurse to rub it well with her hands, particularly on the extremities, down the back and abdomen, before the fire, for a quarter of an hour each morning and evening.—The infant will shew its approbation, and the utility, by kicking and throwing about its legs, smiling, crowing, and by a perceptible brightness in its eyes, and cheerfulness in its countenance. In some countries, particularly in some parts of Scotland, mothers very early adopt the custom of dipping their children every morning into cold water; on which custom Dr. Cullen makes the following observation: That he had seldom, or never seen the offspring of their women, so treated, subject to the rickets. It has long been recommended, and I think with some advantage, to wash the legs, thighs, back, and head, with cold water. In this custom there appear two very material advantages—cleanliness, and generally increasing the tone of the system: by which the system is unloaded, and strength given to the muscular fibres. And upon these two principles, regularly promoted, is it, perhaps, that we may attribute, in a great degree, the prevention of that complaint we have just alluded to—a complaint, the constant concomitant of nasiness, inordinate feeding, with improper food, and indolence.

Though this practice is very serviceable to healthful children, still, in such as are delicate, and disposed to intestinal complaints, some attention ought to be paid to the degree of cold used on this occasion; and therefore, in these, it may be prudent to mix a portion of warm water with that which is cold, so that it may still remain a proportionate degree of cold, compared with the

natural warmth of the constitution, but of warmth compared with other common water; for we know that some will bear cold bathing, or washing, and receive abundant benefit, if the degree of cold only be such, that the internal part of the system shall be capable of producing re-action adequate to the impulse of the fluids occasioned by the external application; if not, many disagreeable consequences occur, arising from a load being thrown upon the internal parts too suddenly, and too copiously, so as to overpower their action, such as congestions in, obstructions, and inflammations of the brain, lungs, viscera, and some of the glandular parts, wherever they appear, from their debility, to be most predisposed to such affections.

In this method it may be necessary to persist for three, four, or five months; but as children grow stronger, they then generally require thicker and stronger food, given them once or twice a day; cow's milk with roll, biscuit. Tops and bottoms may be made use of, moderately sweetened, or panada, mixed with new milk, warm; and this food should be made fresh twice a day in winter, and three times in summer: the new milk should not be boiled, but mixed with hot panada, or pap; nor should the viands be made sweeter than that of mother's milk, nor given hotter than milk from the cow; for victuals too hot, or too sweet, are apt to occasion relaxation of the stomach and bowels, and create morbid acidity; and should the child be of a costive habit, soft Lisbon sugar, if laxative, superfine sugar should be made use of: broths also should make part of their food, minced chicken, or rabbit, with panada, and bread puddings, particularly after they are weaned; consequently, a little before, it would be right to accustom them to such sort of food. Potatoes is a food which numbers of children are fond of, and are very early accustomed to; however, to those of delicate habit, I think them by no means proper, nor any other that are possessed of much visciditity, inasmuch as the accumulation of such tenacious food in the stomach and intestines is apt to form a nidus for worms; but to those of strong digestive powers, born of healthful, athletic parents, such as common rustics, this prohibition is less necessary; as it has been observed, in countries where this vegetable root frequently and commonly makes part, and a great share of their diet, no such inconvenience has been observed; but this depends not upon the salubrity of such sort of diet, but upon the firm stamina, and great strength of the digestive powers of those who feed on it—to the more delicate it is certainly injurious; and it is upon the strength or debility of the constitutional powers by which we must in general regulate our conduct in our directions.—If children are born healthful, and strong,
such

such regulations as are above laid down, will be sufficient to conduct them forwards, with ease and safety, for the first twelve months, or longer; but should they be born sickly, as is sometimes the case, it may be asked, are the same rules to be observed? Under such circumstances, cleanliness, proper cloathing, gentle exercise, and the mother's milk, certainly form the best preventive and curative plan; for, by their proper adoption, I have no doubt but constitutions, weakly in their origin, may be strengthened, and a number of complaints, the natural result of debility not only cured, but often prevented. Though some caution may be necessary in feeding children naturally weak, great care should be taken never to overload the stomach, notwithstanding the food should be confined to that afforded by the mother; it, therefore, should be adviseable to give the breast to the child much oftner, so that a little milk only may be taken at a time, which will be easily and readily digested. This may be considered troublesome to the mother, yet will she be amply repaid, by seeing her offspring improve daily under such judicious management, and meliorating a constitution, which otherwise would be made worse, and fall a sacrifice to painful disease; for, by overloading the stomach, that organ would be weakened, crudities and acidities be generated, green stools, looseness, gripes, and convulsions be the unvoidable consequences; for almost all complaints with which infants are at a very early period afflicted, except those which arise hereditarily, from mal-conformation of some particular parts, infection, or contagion, deduce their origin from defect in the alimentary tube, and that generally acidity, occasioned too often by indiscreet and too copious feeding. But when such acidities are too prevalent, they constitute diseases, and will be taken notice of when we treat of such as are incident to children; we shall only observe, if there appears a proneness in the habit to produce them, besides the mode here directed for invigorating the constitution, it might be proper, now and then, to put a little magnesia into the victuals, if costive: if otherwise, some of the other prepared absorbent earths, such as chalk, crabs eyes, or prepared hartshorn; feed the infant once or twice a day upon broth, and use rice instead of bread, for it is less apt to turn sour than any other of the lighter farinaceous substances.

But many authors have, respecting mothers suckling their children, laid it down as an indispensable duty, and advanced, that almost all, of whatever nature their constitution may be, are capable of performing that office with the greatest advantage to their own constitutions, as well as to their children; for, says Dr. Cadogan, "When a child sucks its own mother, which,

“ with a very few exceptions, would be best for every child,
 “ and every mother, nature has provided it with such whole-
 “ some and suitable nourishment, supposing her a temperate wo-
 “ man, that makes some use of her limbs, it can hardly do a-
 “ miss. The mother would likewise, in most hysterical nervous
 “ cases, establish her own health by it, though she were weak
 “ and sickly before, as well as that of her offspring.—For these
 “ reasons I could wish, that every woman that is able, whose
 “ fountains are not greatly disturbed, or tainted, would give
 “ suck to her child. I am very sure that forcing back the milk,
 “ which most young women must have in great abundance, may
 “ be of fatal consequence: sometimes it endangers life; and of-
 “ ten lays the foundation of many incurable diseases. The rea-
 “ sons that are given for this practice are very frivolous, and
 “ drawn from false premises; that some women are too weak
 “ to bear such a drain, which would rob them of their own nou-
 “ rishment.

“ This is a very mistaken notion: for the first general cause
 “ of most people’s diseases is, not want of nourishment, as is here
 “ imagined, but too great a fulness and redundancy of humors;
 “ —good at first, but being more than the body can employ, or
 “ consume, they stagnate, degenerate, and the whole mass be-
 “ comes corrupt, and produces many diseases.”

However, notwithstanding this authority, I am certain that there are many mothers totally incapable of giving suck, particularly such as are of very delicate nervous constitutions, weak appetites, and possessed of bad digestive powers—whose fluids are acrimonious, and habits subject to hysteric affections; for these, in general, neither afford milk sufficient in quantity, nor properly elaborated for nutrition: hence, when they attempt to suckle their children, they do infinite mischief to their own constitutions, by having it debilitated by the constant drain of what should support themselves, and lay the foundation for a variety of complaints in their offspring, by pouring into it such crude unwholesome fluid. The children of such women should either be set to another woman’s breast, or brought up by the boat. In THE FORMER, there are some precautions requisite to be observed, such as we are directed to by the imitation of nature—as the infant is deprived of the mother’s first milk, which is purgative, and clears the primæ viæ of their sordes, art must supply the deficiency by gentle means: the infant, then, should have some aperient ingredient mixed with its food, as will prove purgative—the best of which is manna, and pulp of cassia. These may be given in such quantities as will procure the child four stools every day for about eight or nine days; or a little castor oil,

oil, mixed with syrup, may be given at proper intervals. Once a day, perhaps, may be sufficient; or the nurse may take some aperient electuary for the first week of suckling, which will sometimes answer the purpose equally, in such doses only as may impregnate the milk with some of its aperient properties; after which, the same directions should be pursued as have been before set down.

But with regard to the selection of a nurse much is necessary. She should be young, cleanly, active, healthful, free from any complaint, possessed of a good appetite, and quick, easy, digestive powers; and, above all things, her milk should not be too old—the nearer the time to her having laid in the better, for the milk will then partake more of the nature of the mother's milk. I have said she should be young—by that I mean between twenty and thirty, for, at this time of life, they are generally in the most healthy state, most active, and more capable of contending with fatigue, and other unavoidable casualties, without prejudicing their milk—which fluid it will be necessary to examine, for some women's milk is apt to be too thick, sweet, and rich, whilst others appear thin and watery—that is best which partakes neither too much of the one or the other of these extremes.

Sometimes I have known parents very solicitous of dieting nurses, in order to keep the milk in proper order, and this I have seen productive of bad effects. I would by no means take any nurse from that mode of living by which she enjoyed a good and perfect state of health; for though we may tell what appears likely to produce general effects in the habit, if we form our judgment from experiments made on different materials out of the constitution, still the peculiarities there existing, which can only be discovered by effects, make such alterations, the cause of which we are unable to investigate, and should therefore be content with observing the consequences. I should, therefore, recommend that nurses should live in the common plain mode, of viands simple and nutritious, composed of animal and vegetable substances, avoiding all high-seasoned dishes, or salted provisions; for these become difficult of digestion, create thirst, induce febrile affections, and promote an acrimonious state of fluids. I specify this, because nurses, often taken into great families, are very desirous of quitting their homely fare, and indulging in the luxuries of high life.

If the BOAT is MADE CHOICE OF, a similar mode should be pursued with regard to clearing the primæ viæ, and the viands with which the child should be fed, must be such as most resemble the mother's milk, fluid, not too sweet, nor given too hot, and partaking, in some degree, of animal and vegetable nature—all-

es, or artificial ass's milk, mixed with thin panada, made as above directed, or milk, warm from the cow : perhaps, in both cases, feeding children at stated periods, about four times a day will be sufficient, if that custom is begun very early.

So essentially necessary has exercise been considered towards the support of health, that it has been advised by every author ; but it should be such as is adapted to the age and constitution of the patient : in the first periods very gentle, afterwards increased, as the strength of the infant increases, and that will be always the best, which, at the same time it gives motion to the body, appears to divert and entertain, for the spirits by these means are exhilarated, and the mind, from being amused, gives also quickness and strength to nervous and vascular action—rubbing the child well before the fire twice a day we have specified, gently swinging, or hoisting for some time together, before some objects which engage its attention, causing the little infant to laugh, kick its legs, and exert its whole body by little springs, in the nurse's arms, will be proper ; for no child can continue long well that is suffered to sit like a log in an indolent nurse's arms ; for such a sedentary position breeds crudities, occasions the habit to be overloaded, blunts the activity of the vessels, retards circulation, and breeds a variety of complaints from internal congestion ;—nor should nurses be permitted to carry children always in one arm, a custom too many acquire, but more particularly if the infant is inactive and weakly ; for, from always reclining to one side, distortion is apt to take place : therefore, they should constantly be removed from one to the other. It is highly useful to suffer little ones to roll upon carpets, and be amused with some little toy or other, that may entice their exertions, to creep from place to place after it. This is a pleasant exercise, and early teaches an active use of their little limbs—and I have observed children, so brought up, more early get upon their legs, and run about, than others who have been used to leading-strings, go-carts, and contrivances of these kinds ; it is most adviseable first to lead them off gently by the finger, and that may be attempted at a more early period than some advise—for the idea of setting children upon their legs very soon, occasions them to be crooked, is not in fact true—so far from that, it gives them additional strength ; and it has been observed, that the legs of children which have at first appeared crooked, have, by early exertions to walk, become stronger, and perfectly straight.

Besides these things, children should often be taken into the fresh air, and remain therein for some time, at least twice a day, and always be kept perfectly clean, changing their cloths immediately

diately upon being fouled; for suffering them to continue in a filthy state, for any time, disposes the parts to become tender and excoriated, creating pain, rendering children peevish, and inactive. They should also be often washed with cold water behind the ears, as well as other parts of the body; for, from neglect in this particular, the moisture, which naturally collects there, becomes acrimonious, irritates, and inflames the parts, and occasions an acrid discharge, which brings on disagreeable and painful excoriations. When it is from the neglect of this custom that this complaint arises, which we may conjecture to be the case, if the child appears healthful in every other respect, washing behind the ears with warm milk and water, or Goulard's water, or spreading a very fine rag, extremely thin, with saturnine ointment, and cleanliness, will generally promote the cure; but should we have reason to suppose it a drain exerted by nature for the relief of internal indisposition, other management seems necessary, which we shall specify when we come to treat on infantile diseases.

As we think that a vast deal depends upon proper Nursing, in order to preserve the human species, and prevent a variety of diseases, which too often end fatally, or lay the foundation for various morbid affections, which are too apt to continue the painful concomitants of our future days, and embitter life through the whole of its progress, we have dwelt longer on this point than may to some appear necessary, but which we think cannot be too minutely observed; and it may not be useless to attempt to comprize the whole in a few short axioms—and, first, we lay it down as an invariable rule,

That, immediately after the birth, children should be wrapped in a warm wrapper, to preserve them from cold; afterwards, in about half an hour, be well cleaned before the fire, loosely and lightly cloathed, not crammed with any dabs, but laid by the mother, and set to her breast as soon as possible.

That, where the constitution will permit, all mothers should suckle their own children, at the same time not depend totally upon the breast, but occasionally use them to the boat, or spoon, in order to be prepared against the effects of indisposition, either in one or the other, should they occur.

That cleanliness should ever be invariably, and constantly observed—children never have their stomachs overloaded, but be fed fully only at proper intervals, five times a day; if not, often, and more sparingly.

That all food, besides the mother's milk, should be of a nature as similar as possible to that milk, compounded of vegetable and animal materials, as ass's, or artificial ass's milk, cow's milk
mixed

mixed with thin panada, or rice used instead of bread, and weak broths occasionally.

That they should be constantly exercised, agreeable to their age and strength, and such used as seems to afford them pleasure, and employ their attention; they also should be much out in the air, and be attended by clean, young, lively, and active nurses.

S E C T I O N VII.

ON MEDICINE.

BEFORE we enter on that part of our plan, wherein we intend to describe diseases, and lay down their most approved modes of cure, it will be proper to say something on the different nature of the remedies which will be recommended, in order to render the knowledge in their application more safe, easy, and certain;—as well as to explain the different general terms under which they are classed—as to these general terms we shall be unavoidably led very often to have recourse.

But previous to the forming our arrangement, we think it necessary to specify the different modes of action of various medicines taken from their known effects, as we find from experience they act in various ways—and we shall first observe—

That—active medicines produce their effects, by confining their action to the moving powers of the constitution, page 56, locally, or sympathetically;—if we except water, considered as a diluent, or such substances, where water abounds in a superabundant quantity.

That no medicine acts upon the semina morbi, or particles, which form the origin of some diseases;—except they lodge in the stomach, intestines, or some other cavities, where they come in contact in an unaltered state with the cause of the affections:—consequently that there are very few, which can in any case be considered as specific;—and then only in this way.

That—all medicines, cæters paribus, possess their own peculiar, inherent power in an unaltered state, and always exert similar effects:—that when they appear to have any variability of action, it is owing to the constitution being different;—to the same constitution having suffered some change,—or some peculiarity;—or to something they must meet with in the habit forming a new compound.

That

That---the strong inherent power, or primary action of any medicine being known, its secondary or consequent effects may be traced in general from the same source—and that when these are altered, it is owing to some constitutional cause last specified, or to the difference of the dose, varying its action only in degree.

That—some medicines, to which are attributed particular powers, have no such powers inherent in themselves; but are inactive, and have their action dependant on some other materials with which they meet, and form combination in the habit, making a new substance, different from the principles of which they are composed, and to which must be attributed their active powers.

That—some medicines, when thrown into the habit, have not the power always of exerting their primary action of themselves alone, but when joined with other materials, produce the effect intended, consistent with the power allowed inherent in them.

*That—medicines do not always in similar doses produce the same effects, on dissimilar constitutions—nor, before the trial, can the active dose be discovered;—therefore in the exhibition of all powerful medicines, this general rule should be observed—to begin with small doses, and gradually increase them, till the proper constitutional dose is manifested;—that is, till nausea, sickness, or some uneasy sensation in the stomach is created, then by lessening the dose in a slight degree, the full one may be ascertained—and this holds good in all active medicines—except such where benefit is supposed to be derived from occasioning nausea, or sickness—as occurs often in the administration of quills—*ipecacuanha*—and some antimonial preparations.*

Now, as we find a number of these actions depend upon the stomach, and its intimate connections with different parts of the human machine, we may say every part, that are possessed of moving powers, and influenced by them, it will not be improper to say something relative to the effects produced by this intimate union.

With regard to connections—sympathy—or consent this viscus has with most-parts of the body, and the mind also, it is very close, known from a variety of appearances obvious to our senses; as well as the observation of the most judicious and sagacious practitioners.—A very late writer, of no small eminence, says—“ Nothing affects the mind more than the state of the stomach, and nothing draws the stomach into sympathy more than affections of the mind.—This is evident from hypochondriac people, whose disease being chiefly seated there, has often grievous effects upon the *seniorium commune*,” that part

where the senses transmit their perceptions to the mind—"or the seat of it. the head—Does not, in these cases, the vomiting of bile proceed from consent between the stomach and liver."

"The stomach has a considerable connection with the viscera of the thorax, or cavity of the chest—abstracted from its contiguity or distention.—In hypochondriacal cases, the heart and lungs are variously affected by the stomach—Convulsions of the diaphragm are often occasioned by slight irritations of the cordia, or upper orifice of the stomach, —many other symptoms might be adduced in proof of the same thing, were it necessary."

"The stomach is connected with the abdominal viscera;—and first, with the intestines;—secondly, with the other contiguous, as well as more distant organs—as spleen---pancreas, or sweetbread, kidneys, bladder, &c."

"This viscus is connected with the extremities, as has been experienced by the transition of the gout from the stomach to the extremities, and vice versa—Cold and heat applied to the extremities affect the stomach."

"It is connected with the whole surface of the body, and seemingly with the extreme vessels every where.—This is demonstrable by many observations---for no sooner do some ailments reach the stomach of particular persons, than spots and efflorescences are occasioned on the skin.---VAN SWIETEN gave such another instance from crabs eyes.---DR. CULLEN had a patient labouring under the hypochondriacal disease, who was relieved of his complaint by pimples appearing between his thumb and finger---and as immediately oppressed by their retropulsion or disappearing."

"Vomiting from constriction of the cutaneous pores is another instance of such sympathy.---Such symptoms, therefore, are safely attributed to acrimony---and, upon the whole, we may conclude, *that the stomach has a general consent with the system universally.*"

If we consider what has been said on the action of medicines, deduced from experience, founded on their effects, and the sympathetic power of the stomach derived from the universality of its connections with contiguous, as well as distant parts of the machine, we shall be able to account for a number of phenomena which would, without such knowledge, appear miraculous, and exceed all belief;--and also be enabled to arrange medicines under their respective heads, all which will be extremely useful in giving us the necessary information how, and in what cases they ought to be applied.

For as nothing can be done effectually in the living machine without the action of the vital principle---and as we have no mode of regulating, or producing any effect upon that *primarily*, we are limited to direct all our operations on the parts of the constitution, that they may be put into such states, as to receive benefit from the salutary influence of that vital principle;---consistent therefore with this idea we shall form our arrangement---which we shall here concisely set down---leaving the full explanation of each particular, till we come to treat of them under their respective heads.

The arrangement consists of five heads :

First—MEDICINES which act upon the inert solids by means of the vital principle, under which will come

1. Nutrients
2. Astringents, and
3. Emollients.

Second—MEDICINES which act upon the living solids by means of the same principle.

Here will follow

- | | |
|-------------------|-----------------------|
| 1. Stimulants | 7. Emetics |
| 2. Antispasmodics | 8. Cathartics |
| 3. Sedatives | 9. Diuretics |
| 4. Errhines | 10. Diaphoretics, and |
| 5. Sialagogues | 11. Emenagogues. |
| 6. Expectorants | |

Third—MEDICINES which act upon the fluids through the system.

To this place belong

1. Attenuants
2. Inspissant, and
3. Demulcents.

Fourth—MEDICINES which manifest their sensible action only in the primæ viæ, or first passages, from the throat to the anus.

Here succeed

1. Antalkaline
2. Antacids. and
3. Antiseptics.

Fifth—MEDICINES which produce their consequences from external application, or on substances formed within the machine, and lodged without the verge of circulation—as

- | | |
|------------------|--------------------|
| 1. Epispastics | 3. Anthelmintics |
| 2. Blood-letting | 4. Lithontriptics. |

This then the arrangement, we shall now proceed to explain the different parts of which it consists specifically.



C H A P. I.

MEDICINES which act upon the INERT SOLIDS by Means of the VITAL PRINCIPLE.

§ 1. **T**HE first of which are NUTRIENTS, from the latin word *nutrio*, to nourish.—These consist of all such materials as are calculated to be assimilated to our own specific nature, by the action of the digestive powers ;—and the application of which so assimilated, repairs the waste which had been occasioned by the different operations passing on in the human machine—Hence, from their affording nourishment, do they take their name.

But these vary in several respects, either as to their being more or less perfected in themselves towards the nature of animal juices,—being of easier or more difficult digestions,—and also with respect to their fluidity or solidity.

But though they are possessed of such various properties, they are all of them reducible to one state, in order to promote support to the animal ; and the changes they undergo for this end are brought about by three different ways in the *first instance*—for *first*, the solid food is minutely divided, and has its texture in a great degree broken down by chewing, and farther reduced by the action of the stomach and intestines—this is called COMMINUION.—It also forms an union with the saliva, air, juices of the stomach and intestines—those of the liver and sweetbread—this is termed COMMIXTURE—and add to these the heat it receives, by which it is thrown into the third mode, or FERMENTATION—and all this it undergoes in the first passages.—In the *second*, it experiences great divisibility, union, and mixture, in passing through the lacteal vessels, and by the force of the lungs ;—and, *lastly*, it is brought into its most perfect nutritive state by the impulsive influence of the circulatory system upon their contained fluids. Hence we may concisely say, that the assimilation of our food, for the purpose of nutrition, is performed by COMMINUION—COMMIXTURE—and FERMENTATION.

And from this we may understand why all nutritious substances should be adapted, both with regard to their quantity and quality, to the strength and vigour of the system.

considered—and also are we taught what mischiefs often arise from the indiscreet indulgence of fond mothers, and ridiculous nurses, who load those, who are weak in some or all these particulars, too freely with food, considered in itself to be nutritious, in order that they may acquire strength,—and by these means destroy the effect, by large quantities being poured into the habit, which smaller proportions of the same food would have indisputably supplied;—for if the digestive powers are loaded with a superabundant quantity more than they can conquer, they become, as it were, diseased; and even the small portion of food, to which their powers were adequate, left in a state too imperfect for affording any nutrition. And this rule is extremely worthy of attention—for valetudinarians, however proper their food, should never take more than they can bear with the greatest ease. Indeed, in people recovering from very severe illness, where the active powers of the habit have been greatly enfeebled, though it is always right to throw in food of the most nutritious nature, the most easy of digestion, and such as fits the most light on the stomach, still should we begin with small quantities, increasing them, and altering the food in proportion as the patient recovers strength; and this for very obvious reasons, which will soon appear, as we examine the nature of our food more minutely than we have done in speaking of the non-naturals.

Though we have before said, that perhaps our first food partook most of a vegetable nature, yet as all substances are the more nutritious, the more they approach to that of animal, a division seems here requisite, in order to shew the different degrees they maintain with respect to the nutriment they afford, and the proper modes of best acquiring and applying them to the constitution.

NUTRIENTS, therefore, may not improperly be arranged under three heads:

1. ANIMAL 2. VEGETABLE 3. MIXED.

Of the FIRST—All those are the most powerfully, and most quickly nutritious, which have the least acidity, and are most elaborated, or brought nearest to the nature of animal fluids—hence the finer juices of the older animals become the most eligible, and these are best procured by slight boiling, or infusing, in such a diluted state as the circumstances may require; that is, in proportion to the strength of the digestive powers:—for, as we consider the very fine juices of animal substances the most nutritious, because more readily assimilated to our own nature, for very weak debilitated habits, infusion is the most advantageous process, as by these means the subtler parts are preserved, which long or quick boiling would be dissipated—but for those pos-
 sessed

luffed of stronger digestive powers, there is not so much necessity for this nicety.

Of these materials the most nutritious are, beef—and mutton—tea—as they are called—made in the following manner :

Take of the lean part of beef, or mutton, one pound, cut it into thin slices, and let the texture be well broken, by bruising it, then add to this one quart of boiling water, in an earthen or tin vessel, keep it close covered till it is quite cold—or boil them over a quick fire, for five minutes ; separate the scum, and decant the clear liquor for use ;—but should we require more of the stronger parts of them, the liquor may boil ten, fifteen, or twenty minutes, and then proceed as before directed.

The juices of the older animals are preferable to those of the younger, because those of the latter are more tenacious, and partake not so much of the nature of our own fluids, consequently yield, in that respect, to the former.

But when it is requisite that the flesh of animals should be given in its solid form—that of young ones is considered the most proper, as their fibres are much more tender, most easily broken down by chewing, and yield their nutritious part more readily to the acting powers of digestion.

MILK, of which we have before spoken, pages 82, 83, though of a mixed nature, between animal and vegetable, we consider next ; for it is a fluid only half perfected, and partakes, in some degree, of each of the other classes. We have, in another place, delivered our sentiments on the allowed degrees of preference one species of milk has to another, and have shewn that of asses to be the best of any which could be procured in proper quantity—we shall here, therefore, only observe, where that cannot be acquired, either from the greatness of the expence, or the scarcity of the animal, the following, called *artificial asses milk*, is not an insignificant succedaneum :

Take of candied eryngo root, one ounce ; pearl barley, half an ounce ; liquorice root, three drams ; boil them in two pints of water till they are reduced to one, then add one pint of milk fresh from the cow, boil them gently together, and strain for use. Half a pint of this should be drank, in general, two or three times a day ; but should that quantity be too large, it may be reduced, and repeated oftener.

The VEGETABLE CLASS has been considered as more difficult of assimilation than either of the other, because it is more distant in its nature from our fluids ; and perhaps those may be found the most nutritious that approach nearer to milk, that is, more impregnated with oil, not essential—saccharine substance—and a small portion of vegetable acid ; for it is from these qualities

lities that all nutrition, in food of this sort, is supposed to be derived.

We have spoken here, and in another place, of these things, merely as appropriated to afford nourishment only to the animal; but they must be allowed to have other properties, which it is necessary to specify, as by these means different changes are produced in the constitution.

ANIMAL FOOD, particularly fish, is more stimulant and alkaliescent, because more prone to run into that state, which generates pungent acrimonious salts; consequently becomes more heating.

VEGETABLE, more diluent and acescent, from its being more replete with aqueous particles, and having strong propensities, from their very nature, to become acid—hence more cooling.

Milk, in this instance, partakes more of the latter, as it is subject, left to itself, to become acid; besides, vegetables are more emollient and sheathing, as most of them abound not only with watery particles in great proportion; but also with those which are mucilaginous; and seem to have inspissating, or thickening powers, from their mixture with the fluids: hence, if we take in the account the quantity of fixed air with which they are replete, we may be convinced of their utility in cases of the sea or true scurvy, and in all those morbid habits, where the fluids have acquired too great degrees of thinness, from inherent or accidental acrimony. Milk also retains the same properties.

Roasted—broiled—or fried animal food, is more stimulant than boiled, and runs quicker into a state of putrescency—from the different culinary processes they undergo: the first being prepared only by the action of strong heat, by which means the fluids are rendered more pungent, and more highly alkaliescent—the last receiving a less degree of heat, and through an aqueous medium, with which part of the animal juices are mixed, rendered more dilute, and less highly subtilized;—but when stewed down, to a great degree, and eat with the fluids with which it is prepared, it approaches nearer to the former, than when only infused, or gently simmered; nay, indeed, often exceeds them; and hence becomes also more difficult to be concocted or conquered by the digestive organs.

Of the vegetable class, we have said farinaceous substances are the most nutritious, and those which have undergone some culinary process, because their fibrous parts are rendered more tender: and those which are most easily assimilated, which contain the most oil, saccharine substance, and a small portion of vegetable acid; consequently those which have suffered maceration and

and fermentation, as they become sweeter, and have their viscid parts rendered thinner, and more flexible, by those means are more easily digestible :—But we must in this place make one observation, which affords an objection to what is advanced.—There are another class of vegetables, which are supposed to be more nutritious—and these are the FUNGI, or those fungous extuberances, called *Mushrooms*, or *Champignons*—*Truffles*—*Morilles*, named by NERO, *the Victuals of the Gods*—they are considered to afford more nutriment, from yielding, on their chemical decomposition, materials similar to animal food. DR. CULLEN says, “if they are truly vegetable matters, of which some have doubted, they are very different from every other vegetable with which we are acquainted—-for in the first part of their distillation, without addition, they give out no acid, but a large proportion of volatile salt ;—and exposed to undergo a spontaneous fermentation, they manifest no acrescency, but become immediately putrid—hence shew they a very near resemblance to animal substances ; and it may be presumed, that they are more considerably nutritious than almost any truly vegetable substances.”

I have inserted thus much relative to these fungi, in order that we may be acquainted with their particular uses, not as correctors of animal food, like other vegetables, but rather as animal food itself, and correctors of acidity in the stomach—-and on this account become a pleasing delicacy to such, who are forbid the use of all vegetables, on account of a prevalent redundancy of acid in the first passages.

All the acid---bitter---or highly flavoured vegetables, as they consist of parts which are not readily subdued by the digestive powers, but pass in an unaltered state in the course of circulation, come more properly under the class of medicinal substances.

Under this head of Nutrients we shall have no occasion to supply a general catalogue, for all those things fall under this class which we employ as food, and include whatever we eat and drink for the purpose of supporting the animal machine, and repairing its waste.—And if we revert to what has been said in treating on aliment, p. 70, and on those liquids we in common drink, p. 80, with what we have here advanced, we shall be supplied with knowledge sufficient properly to direct us in our selection ; for I am fully persuaded, that we oftener err by the quantity of food that we take, than the quality : as it is certain, such is the power inherent in our habits, that though our food may be in its own nature in any particulars dissimilar, still if we only supply such quantities as are judiciously proportioned to

our

our digestive powers, whatever the aliments on which we feed, they will all be reduced to the same state, adapted to the preservation and nourishing of the machine ; we shall therefore advert to our next subject.

§ 2. **ASTRINGENTS**, from the Latin word *astringo*, to bind, or condense, which are all such substances as by their action render the softer parts more compact, give a greater firmness to the solids, and a cohesive tenacity to the fluids. Their particular power in condensing the solids is obvious from the effects which they produce in tanning, or making of leather.

BOERHAAVE was of opinion, that, when applied, they bring two distant parts of a moving fibre into closer contact, and into a more firm cohesion, and this by insinuating between each particle of the fibre another of the same kind.

Dr. GULLEN thinks, that as a fibre is composed of solid and fluid, the cohesion of the whole is increased by diminishing the watery, or by addition of the solid substance : but is rather a favourer of the first opinion.

With respect to the addition of any solid substance, it may be the case when acting on the inert solids, free from the influence of the vital, or nervous power ; but in the living machine, we cannot suppose medicines of this class derive from this source their operation ; for under those circumstances the medicine must be universally diffused, and come in contact immediately with the parts upon which it acts.

This, therefore, cannot be true—if we consider the very small portion of those which shew their general astringent power, when taken upon the stomach, and the very quick mode in which they produce their effects ; besides, the variety of substances which manifest a constringent efficacy, when the machine is variously affected from different causes.

In proof of this we shall mention some few particulars :

ALUM, when given in doses of a few grains, has been known to stop profuse bleedings, arising from a relaxation of the solids, in a short space of time.

WHITE VITRIOL—BARK—STEEL—and some other of the strongly acting medicines, have caused the cessation of other discharges, by invigorating the system, and not from the locality of their application.

PUNGENT STIMULANTS have produced instantaneous effects, though not durable, in cases of laxity.

SEDATIVES, or those medicines which manifest their effects by alleviating pain, and abating the quickness of vascular
S action,

action, have early shewn their power in the abatement of acrid defluxions.

Now it appears evidently that all these produce their influence by their action on the stomach sympathetically conveyed to the machine in general, and to the parts particularly affected, which, as being in a more morbid state, they experience more powerfully.

With regard to the fluids, those medicines which have the power of sheathing acrimonious particles, from whence discharges have proceeded, may be considered as astringents. In fine, whatever will promote a contraction of the solids, or coagulation of the fluids, come under this class.

But it must be observed, that many of these excite their action instantaneously, but do not give the system the power of continuing the effect;—whilst others act more slowly, still occasion, as it were, a permanency to that action in the constitution.

VOLATILE substances—essential oils, and others of this class promote very quickly the influence of the vital powers, by which means the constitution very early is made sensible of their power; but as soon as they cease to act, which they do in a short space, the morbid effects, they seem to have conquered, are reproduced.—Alum also labours under the same disadvantages.

But the more slowly acting astringents continue their force longer, and appear to give a stronger and more lasting cohesive power to the particles of the solid fibres, as if they increased their attractive influence *inter se*.

From this knowledge we shall be able to deduce a mode of prescribing, of infinite use in practice, which would at an earlier period have been considered as contradictory, and ridiculous, because deviating from the commonly received opinion—for, from what has been advanced, we see that volatiles and astringents may be judiciously united, and will be the means of assisting the effects of each other, by producing them sooner, and making them more lasting—as I have often found in the course of practice, particularly where the constitution has been defective in vascular irritability, and nervous incitability; for, by adding volatiles and pungent stimulants to bark, in many cases, the wished-for effects have been produced, which could not be attained by bark alone.

To these, where the humors are acrimonious, sheathing medicines, called demulcents, may be joined;—and sedatives occasionally had recourse to, where spasms attend relaxation of the solids.

But we must here observe, that where the astringent saline minerals, such as those of steel—white, and blue vitriol—the preparations of lead—alum, &c. may be thought proper, volatiles

tiles must not be joined with them, as they will occasion a decomposition, and render the astringent power of the compound mineral less active, nay, perhaps, destroy it altogether.

The catalogue, presented to us by various authors, is extremely copious, but we shall content ourselves with a few, which are in general allowed to be the most efficacious.

ASTRINGENTS *from the Mineral Kingdom.*

IRON, filings, or rust prepared—dose from five grains to 30.

Ammoniacal iron, 3 grains to 15 or 20.

Tartarized iron, 10 grains to 30.

Vitriolated iron, 3 grains to 20.

Tincture of muriated iron, 10 drops to 60.

ALUM, burnt, from 2 to 15 grains.

Whey, from 2 to 4 ounces.

Curd, externally.

CHALYBEATE WATERS—

Tumbridge

Hampstead

Pymont

Ilington, &c.

ZINC—Calcined zinc, 2 grains to 6.

White vitriol, 1-2 a grain to 2.

COPPER—Blue, or Roman vitriol, 1-4 of a grain to 2.

LEAD—Water of acetated litharge, from 1 to 3 drops.

Acetated cerufs, 1-2 a grain to 1 and 2.

From the Vegetable Kingdom.

ROSES---Conserve, 1 or 2 drams to 1-2 an ounce.

Infusion, 2 ounces, or more.

TORMENTIL ROOT—

In powder, 8 grains to 40.

In decoction, 2 to 3 drams.

KINO---powder, 1-2 a scruple to 2 scruples.

MADDER---powder, 20 to 30 grains.

In decoction, 1 ounce in 3 pints boiled to 2---dose, 2 ounces.

WOOD SORREL—Conserve.

WATER-DOCK ROOT—

In decoction, 1-2 a pound to 6 pounds of water reduced to 4---dose 8 ounces.

CUP MOSS---in decoction, said to cure the chincough.

QUINCES---Marmelade.

MULBERRIES---Syrup.

MEDLARS---Fruit, not to be eaten before long keeping.

SLOES---Conserve, dose 1 or 2 drams.

NETTLE, stinging---Juice, or decoction, 2 to 4 ounces.

BEARS WORTLE BERRY, the leaf---

Powder, 15 to 30 grains.

Decoction or Infusion, 1 or 2 drams in a pint and 1-2 of water reduced to one pint--dose from 6 to 8 ounces.

TINCTURE OF CATECHU, which was called JAPAN EARTH, 1, 2, or 3 drams.

POMEGRANATE--In decoction, An ounce to a quart of milk and water reduced to a pint.

OAK and ASH BARK---Slight decoction, gradually increased.

SIMAROUBA, or GUIANA BARK---Powder, from 10 to 20 grains.

LOGWOOD---Extract, 10 to 40 grains.

Decoction, 1-2 an ounce to a pint and 1-2 reduced to 1 pint--dose 3 ounces.

GALLS---externally, 1 part of powder to 8 of hog's lard.

All the acids, vegetable as well as mineral---all the bitter Stimulants---Sedatives---and all the stimulant Balsams. We shall not supply any formula here, from the different combination of these articles, but specify them more particularly, when we come to treat of those cases where such applications are required.

Though we have set down the doses according to what is generally held proper for adults, expecting they will be varied according to the age and constitution of the patient, and the exigence of the case to which they are necessary, one observation it is proper to submit here, for the information of the reader; which will apply in all the other departments on the subject of medicine, as well as in this place.

That, as the same dose of any active medicine will not be adequate to produce the intended effect *on all constitutions*, the dose specified being too large for some, and for others too small---we should always begin with a very moderate dose at first, and increase it gradually, till the full proportion can be discovered; thence we shall be certain of deriving every advantage which the medicines can procure. Besides, we shall avoid producing too violent effects upon those habits which have a natural antipathy to any particular medicine, which can only be discovered from experience.

§ 3. EMOLLIENTS---so denominated from the latin word *emollesco*, to grow soft or supple.

These act in a mode opposite to the preceding class, inasmuch as astringents give firmness to, these induce a relaxation in the solids.

They have been called RELAXANTS, and may be considered as such, if we include their mode of action in a double sense; for

for though they have been thought to produce such a change in the solids as occasioned them to be extended, more than they were before, without rupture; still they have been acknowledged to reduce a part of the body, indurated and compacted in one uniform bulk, into its state of contained liquid, and containing solid.

It has been conjectured, that emollients act chiefly upon the solids, by introducing their particles, which consist mostly of the watery, mucilaginous, and oleaginous kind, between those which compose the solid fibre, thus forcing them farther from their sphere of attraction, and bringing them nearer to a state of fluidity; for solids and fluids differ but in proportion to the stronger or weaker attractive power of their component parts.

But notwithstanding this may be the case in many, nay, perhaps most instances, still they may produce their effects generally over the system by their action on the stomach; for if that organ is relaxed, so will all the other parts, dependent upon it, without having any watery particles introduced to weaken their texture.

FEAR and GRIEF are powerful relaxants, but these may be said to affect the mind and vital power, and hence produce their effects.

INEBRIATION has with numbers the same consequence, but this arises from the relaxed state of the stomach, which is soon taken off by stimulating that organ, as has before been specified in the beginning of this work.

Women in general experience similar mischiefs, from repeatedly drinking *hot tea*, and other liquids under the same circumstances.

EMETICS given only in small nauseating doses, enervate, and relax the system from the same cause.

SEDATIVES (chap. 2. § 3.) may also be considered in some degree under this head.

Those, however, which produce their effect upon the machine in general by sympathetic power, will be considered under different heads. Under emollients we mean to rank only such substances as act from their watery, mucilaginous, and oily particles, of which they consist; and these prove most effectual on the parts to which they are more immediately applied, which DR. CULLEN conceives to act in one of these two ways; "the one by being insinuated into the substance of the solid, and thereby diminishing the density of the whole of the mixt, they diminish its force of cohesion. The other is, when, by being insinuated into the interstices of, or spaces between dry particles, they diminish the friction which might otherwise occur, and thereby

“ thereby render the whole more flexible. The former seems to be the operation of water, the latter of mucilage and oil.”

And these three seem to include all the emollients, if we were to examine the articles, multifarious as they are, which constitute this class. Indeed, for internal use, the writer above specified rejects the whole, and gives the preference to the infusion or decoction of lintseed; which is fully as efficacious as any other.

And here, though we must observe, that as in many febrile complaints the use of emollients seem absolutely necessary, where the degree of febrile affection runs very high, we are rather to adhere to those of the watery, mucilaginous and farinaceous kind of the vegetable class, than to those abounding with oil, or animal substances; because, from heat, they are apt to grow rancid, acquire acrimony, and hence become too stimulant, and much increase the febrile effects we wish to restrain.

The catalogue of EMOLLIENTS furnishes us with a great variety of substances, out of which we form the following selection—which, as they are so very simple in their own nature, and produce no powerful action in the habit when taken internally, require not to have any particular doses annexed to them.

EMOLLIENTS *from the Animal Kingdom.*

Weak broths, crude yolks of eggs, honey, milk, cream, butter, suet, fat, spermaceti.

From the Vegetable Kingdom.

The seed of quinces, line, fœnugreek, white poppy, wheat, rye, oats, barley, particularly the farina of these, figs, raisins, dates, marsh-mallows. balm.—Decoctions or infusions of these are pleasant and efficacious for common drink.

Oil of almonds, olive oil. All bland expressed oils.

Bete, spinage, white lily root, boiled onions. Liniments, ointments, fomentations, or cataplasms formed of these substances, which we shall, in their particular places, hereafter specify, have similar effects—perhaps the warmth with which they are applied may have some gently stimulating power, and hence prove also in some degree efficacious in those complaints for which they are advised.

To these we should have added the warm vapor of an animal recently killed—for we have instances of the arm, and other parts, put naked into the body of an animal immediately after it has been slaughtered, receiving great benefit, in cases where relaxing applications seemed requisite; and where many of the others had been tried without advantage.

But the most emollient of all is VAPOR, either received by the mouth,

mouth, or injected by glyster, moderately warm---and indeed it is almost universally esteemed so, whether applied internally or externally.

These form the class, it has been said, of medicines which act upon the inert solids by means of the vital principle. That astringents and emollients may act upon the inert solids also, perhaps, without the aid of that principle, in many cases, when brought into contact with them, may be allowed---but that in the living machine they do, is much to be disputed---and that the nutrients cannot, is evidently clear; for if that principle is defective by which the nutritious matter is applied to particular parts for their support and reparation, the matter itself will avail but little. This seems clear from our observations on paralytic limbs, receiving such slight degrees of support, and of being scarce at all benefited by the application of astringents or emollients, where such deficiency takes place. However, in a work of this nature it seems not necessary to go too minutely into a subject of so much intricacy; it is enough for our purpose to point out effects produced by the particular materials specified, without being very solicitous of investigating the precise mode by which they are accomplished.

Our second position leads us to treat

C H A P. II.

On MEDICINES which act upon the LIVING SOLIDS by Means of the SAME PRINCIPLES.

THE first of which are,

§ 1. STIMULANTS. so called from the Latin word *stimulo*, to prick or goad:—and these are all such medicines as increase the oscillatory or vibrating motion of a fibre, or excite the action of the moving fibres in the living animals.

How stimulus increases action we cannot point out the precise mode; but this we know, that all these things which can increase the influence of the vital powers, either diffusively or partially, are real stimulants, and as such must be considered.

They have been concluded to be of two kinds—DIRECT and INDIRECT. The *first* are imagined to act directly on the moving fibres;—the *second* on the organs of sense, by which means a perception is excited on the common sensorium, which acting there, determines the nervous power to flow more copiously in-

to

to the whole, or particular parts of the system. These are the most common and universal. But stimulants do excite motion in the moving fibres themselves independent of any connection with the common senserium; for if the heart, or some other of the muscular parts, are separated from the body, they may have their action excited by the application of particular stimuli: this then is a certain proof of an irritable power inherent in themselves independent of connection with any nervous power. *And again*, it is as clear, that a stimulus applied to the stomach will diffuse its power to the whole habit; or if to a part, other parts far distant will experience its influence, as in cases of general heat being occasioned by the use of cordials or volatile substances—vomiting from irritation of the kidneys, &c. Hence then we may fairly conclude, that action is produced by sympathy, as well as local stimulus.

Besides, in many of these actions, mental power is the first cause, as we may discover in longings, desire for that food of which we see others eating with uncommon relish; by which means the stomach is stimulated, and a strong sensation of hunger is induced, which did not before exist—weeping also from sorrow,—vomiting and sickness from recollection and reflection, &c. These are incontestable proofs of the truth of our assertions.

Hence, then, stimulants may be properly divided into three classes:

GENERAL—and these are such materials as are taken into the stomach, and communicate general affection through the system, owing to the connection of that organ with every other part of the machine.

LOCAL—where irritation is produced on the part affected.

MENTAL—where, without the application of any material substances, applied to the stomach, or any other part, similar affections will be produced by the powers of the mind.

Indeed, almost all active medicines might be ranked under the head of stimulants, were we to class them according to their known operations; submitted to different divisions under this general term, agreeable to the effects they produce—but we shall confine ourselves to such substances as invigorate the system, increase the action of the nervous and vascular power locally or universally,

And from hence shall we see their use, by facilitating the passage of the blood through the parts in which it moved too slow, or was morbidly obstructed by augmenting the force and celerity of the circulation—they quicken the senses where morbidly affected, rouse the mental faculties when in a lethargic state, and exhilarate a desponding condition. They

They restore the powers of motion where morbidly defective, and also the strength of motion where morbidly weak.

From their uses have they been divided by some authors into such as are diffusible—cordial—and topical by their action—that is, such as have their action conveyed over the system—such as exhilarate the spirits—and such as are applied to some particular parts morbidly affected. Examples of the FIRST have we in

Volatile alkaline salts, Electricity, Heat.

Of the SECOND in

Cinnamon, Nutmegs, Wine.

Of the THIRD in

Mustard, Cantharides, Preparations of mercury.

These we have specified for the ease of selecting the particular substances, according to their uses, from the following catalogue of

STIMULANTS—most of which, when taken internally, have a power of increasing the force of circulation, and invigorating the system---and some proving also more immediately cordial, by revivifying the spirits.

Of the FIRST CLASS are

Horse-radish	Myrrh
Mustard	Guaiacum wood
Garlic	Sassafras
Onion	Contrayerva
Leek	Snake-root
Turpentine	Cascarilla
Ballams of Copaiba, Gilead, Peru	Wake Robin
Gum Guaiacum	Volatile salts,

Of the SECOND,

Lavender	Nutmeg
Rosemary	Cloves
Pennyroyal	Pimento
Pepper-mint	Pepper
Aniseed	Ginger
Carraway	Capficum
Cardamom seed	Grains of paradise
Cinnamon	Wine
Cassa wood	Essential oils
Mace.	

Those used topically are

Volatile alkaline salts

And these made either into plaisters, epithems, cataplasms, ointments, or liniments.

Mustard
Horse-radish
Cow-itch
Cantharides
Euphorbium
Preparations of mercury

The following, though truly considered as possessing a greater or less degree of stimulating power, produce not the effects before specified so sensibly :

Zedoary	Quassia wood
Gensing	Hops
Cascarilla	Dandelion
Common and Roman wormwood	Millipedes
Camomile	Hyssop
Orange and Lemon peel	Ground-ivy
	Hedge-hyssop.

All the NUTRIENTS and ASTRINGENTS are of this class ; and many others of the succeeding classes, though stimulant, are more particularly appropriated to other purposes, under which heads they will be arranged. The catalogue here given will be sufficient to answer the purposes to which stimulants, merely considered as such, are calculated to be of any use.

But as some of them have been thought, by very respectable authority, to possess some peculiar powers, and are easily attainable, we shall beg leave to specify them.

HYSSOP has been reputed to be attenuant, resolvent, pectoral, in coughs and asthmas occasioned by viscid phlegm ; thought to produce expectoration, drank in form of tea, and sweetened with honey ; and to have the power of promoting the menses attributed to it.

GROUND-IVY, drank in the same form, or in decoction, has been esteemed corroborant, aperient, and detergent, used also in coughs and asthmas, to attenuate viscid phlegm and mucus, and to brace and strengthen the vessels of the lungs ; formerly much ordered in consumptive cases, and ulcers of the kidneys, as an efficacious remedy.

PENNYROYAL. This has been considered cordial--of great use in hystERIC cases---to increase the tone of the system---and the chief vehicle for other medicines, to which were attributed the power of promoting the monthly discharges of the female sex. Indeed, in this last case, by some practitioners, it is held in no little estimation.

SPEAR-MINT. To this has been assigned cordial virtues, and a powerful restrainer of vomiting.--tea made of this herb often answering this purpose, where every other effort has failed. It is recommended in flatulent cases, fluxes, worm cases, and many other disorders ; and, though considered as a stimulant, it is not heating, a peculiar advantage it possesses over many other of the cordial class. Pepper-mint seems also to possess the same power.

HEDGE-

HEDGE-HYSSOP. This is named a hydragogue, or an evacuator of watery humours from the body---hence useful in dropical cases, and also worms, from its purgative power. In substance it is said to promote vomiting, sweat, and urine, to be of service in maniacal and venereal cases, after mercury had been given freely without effect---the dose, in powder, from 10 to 30 grains.

DANDELION. This has been considered as peculiarly useful in visceral obstructions, particularly those of the liver, as it seems calculated from its stimulant deobstruent powers, to promote bilious discharges---and, from experience, has been concluded highly efficacious in all biliary infarctions of the liver.

WAKE ROBIN. Much has been said by men of the first medical authority in favour of this medicine, and used to be recommended as promoting watery excretions, quickening circulation in cold phlegmatic habits, and in diseases from viscid phlegm.

In deep seated, fixed rheumatic pains, it has been given with success, in doses of from ten grains to a scruple of the fresh root two or three times a day.

GEOFFROY and **BERGIUS** speak highly of its powers, as restoring lost appetite, curing intermittents. In the jaundice, green-sickness, hysterical, hypochondriacal, and other diseases, it has been found useful. In cases also of obstinate head-achs, which return at intervals, without fever, mixed with alkaline aromatics and absorbents. It is given in the following manner :

Take powder of wake robin, vitriolated tartar, of each ten grains powdered rhubarb, five grains. If these purge too violently, the quantity of the arum may be lessened.

GEOFFROY used to give it in doses of from half a dram to a dram ; and by being boiled in vinegar, he says it becomes powerfully diuretic.

LEWIS gives from ten grains to a scruple of the fresh root twice or thrice a day, made into a bolus, or emulsion with oily, or mucilaginous substances---it generally produced, whilst the patient was warm in bed, a copious sweat. It is now kept in the shops made into a conserve, half a dram of which may be given as a dose, and gradually increased.

Thus much has it been thought necessary to say of stimulants, in order to furnish a general idea of their extensive utility, under proper management ; but as their uses are so multifarious, and almost the whole catalogue become repeatedly under our consideration in the succeeding part of this work, wherein we shall be more particular in the specification of their doses, and the pecu-

liar cases to which they are applicable, we shall quit this part of our subject, and proceed to our next head.

§ 2. ANTISPASMODICS, derived from *antispasmata*, medicines which take off spasms, or what are commonly stiled convulsive affections of the human machine.

Though there certainly appears a difference between spasm and convulsion, as they never run one into the other; yet there have been many disputes relative to the definition, so that their distinctions may be properly marked.

Some have said, if the solids are drawn into involuntary contractions, and they do not continue long, but go off, and frequently return again, these affections are termed *convulsions*—but if they remain a considerable time, *spasms*.

GAUBIUS defines a spasm, a violent, involuntary, inordinate action of the moving fibres; and says, they who distinguish a spasm from convulsion, call the first a continued, the latter an alternate contraction of the muscles.

They have been distinguished by the terms tonic and clonic, from the Greek words *teino*, to stretch or fix, and *kloinco*, to shake. Hence, by the former are to be understood, such spasms as are continued; by the latter, such as are tremulous;—or, in other words, SPASM we would understand those muscular contractions which, once excited, remain in that state of contractility for some length of time—by convulsion, such as are irregular, and have relaxations and contractions alternating quickly with each other.

Though this distinction is necessary to be known, for the better understanding the authors who have written systematically on the subject; yet still it will be of little use in a practical view; as we shall find, according to the cause, what will be useful in one species, will also in the other. Indeed, there are such a variety of causes, so very different in their own nature, which may produce spasmodic or convulsive affections, that there will necessarily appear to be a great diversity of medicines which ought to be ranked under this head.

SPASMS arising from laxity, are removed by *astringents*; from an over distension, by *emollients*, from acrimony, by *demulcents*, or such medicines as sheath the offending particles; from acidity in the first passages, by *absorbent*, or *alkalescent substances*, which, by uniting with the acid, form a third substance, inoffensive in its action, and thus remove the cause; from wind, by those materials which disperse wind by their stimulating powers, and are called *carminatives*; from worms, by those stiled *anthelmintics*, or destroyers or evacuators of them, &c—but these are considered, in regard to their known action, under their respective heads, calculated to operate against, and remove the acting cause.

But what we understand in this place by antispasmodics,

dies, are such medicines as are serviceable, from their influence on the nervous energy, or increased nervous power, by removing spasmodic contractions taking place in different muscles; and by allaying convulsive agitations, where the cause is too latent to be discovered precisely; or, if conjectured at, too obstinate to be removed by medicinal applications with any degree of certainty; so that the constitution being relieved from the violence of these effects, nature may be left more at liberty to exercise her power for the extirpation of the operating morbid cause.

And in our administration we must observe, where the constitution appears to have an inflammatory disposition, we must select such as are the least stimulant; where relaxation or debility seems prevalent, those which are more powerful.

Besides, as the class of antispasmodics consist of medicines diametrically opposite in some of their sensible properties—some being highly foetid—others as greatly odoriferous—and are considered as medicines of equal efficacy, we might suppose that there is no limitation in our selection—but we shall find that some will be efficacious in one constitution, and not in another—for where foetids agree, the odoriferous ones will, very often do not—and so on the contrary; therefore, where one class has been tried ineffectually, we must have recourse to the other. And here also it will be useful to observe, that very often, for want of giving these medicines in full doses, their effects have not been produced; consequently it is proper to increase them, very often freely, till that point can be properly ascertained.

The following supplies the useful catalogue of ANTISPASMODICS.

From the Vegetable Kingdom.

PENNYROYAL—

Infusion—

Distilled water—

Essential oil,

from 1 to 5 drops.

RUE—Extract,

SABINE—Extract,

Powder,—

ASA FOETIDA—

Tincture,

GUM AMMONIAC—

Milk of,

GALBANUM—Tincture,

CAMPHOR—

Mixture,

from 10 to 20 or 30 grains.

from 6 to 20 grains.

20 to 30 grains.

from 5 grains to 20.

$\frac{1}{2}$ dram to a dram.

from 10 to 20 grains.

1 ounce to 1 and 1-2.

from 10 drops to 60

from 5 to 20 grains.

1-2 an ounce to an ounce or more.

Spirit, for external application.

VALERIAN—Powder,	from 1-2 dram to 2 drams:
Tincture,	1 to 2 drams.
Volatile,	1 to 1 and a 1-2 or 2 drams..

From the Animal Kingdom.

MUSK—	from 10 to 30 grains.
Mixture,	from 1 to 2 ounces.
CASTOR—Powder,	from 10 to 20 grains.
Tincture,	from 20 to 60 drops.
AMMOINIA prepared, and } SALT OF HARTSHORN, }	from 3 to 20 grains.
Liquor,	from 20 drops to 60.
Oil, or animal oil,	from 5 to 30 drops.

From the Fossile Kingdom.

AMBER—Oil, rectified,	from 5 to 20 drops.
Salt, purified	5 to 15 grains.

Though this salt, notwithstanding it is sometimes given in hysterical cases, more properly belongs to the diuretic class, as allowed to be a promoter of the urinary evacuation.

ROCK OIL—externally applied, as is also the oil of amber, in rheumatic and paralytic cases.

All the essential and empyreumatic oils are of this class.

ÆTHER—vitriolic,	{ externally applied—dose from 20 to 60 or 80 drops
Spirit of vitriolic æther,	20 to 60 or 80 drops.

To two articles, which we have specified here, besides their antispasmodic power, others have been attributed of no less consequence—which, as medicines easily attainable, we shall particularize.

RUE has been recommended in cases where viscid phlegm has abounded, and the circulation of the blood been languid. As an attenuant, resolvent, and deobstruent it has been much extolled; also in hysterical cases; and as a promoter of the menstrual discharge. BOERHAAVE had the highest opinion of it. CULLEN says, it is certainly an useful medicine. It is best given in conserve, from half a dram to half an ounce, two or three times a day.

SABINE. This is considered as a warm aperient medicine, increasing glandular secretions, and a powerful promoter of the menses. It is a very heating and acrid substance, and therefore requires much caution in the administration. Dr. CULLEN thinks it more powerfully determines to the uterus than any other medicine—of which truth experience has often convinced me.

me. Dr. HOME, out of five patients labouring under obstructions of the menstrual discharge, cured three, or rather four, by giving half a dram of the powder twice a day, though a dram is the dose commonly recommended. Of the extract, from six to twenty grains is a dose. Externally applied, it has been esteemed a powerful destroyer of fungous excrescences, in taking of venereal warts, where other applications have failed.

§ 3. SEDATIVES. This is derived from the Latin word *sedo*, to alluage, rest, calm; and they properly belong to such substances as diminish motion in the system, and the force of the moving powers—and also alleviate pain.

Hence, whatever diminishes motion in a part, or in the whole of the system, whether by rendering it insensible to any painful stimulus, or by arresting, by any means, the impulse of the vital powers, may be called sedative. All medicines, therefore, which cool the habit, or take off inflammation—some of the acids—neutral salts—emollients—astringents—and antispasmodics, may properly come under this head, as they diminish motion in the system—but in this place our objects are limited to the consideration of such substances only as are thought particularly to act on the nervous power.

With regard to the precise mode of action of those selected to form this class, we can say very little, as our knowledge of the nervous system is so incomplete. However, thus far we may venture to assert, that they act either by having a peculiar power of restraining the violence, or rendering more equal the irregular motions of the nervous power, by their influence on the common sensorium, and its appendages primarily, (56) or by blunting the irritability of the living solids, and thus preventing the same power from exercising too forcibly its influence. And this they do either sympathetically, by having their action more diffusively communicated from the part they first affect; or by the locality of their action, when they are applied to the parts themselves; for it has been proved, that the heart taken out of the body, has been made to act by the application of some stimulus, and consequently, that this power of contraction was dependent on something foreign to the influence of the common sensorium, or nerves, which was certainly inherent in the muscular fibres themselves; and if opium is dissolved and thrown upon the heart so separated from the machine, no action from stimulus will take place—which proves, that, by means of this sedative solution, irritability is destroyed.

And it is commonly known, that if a small dose of opium be taken on the stomach, it will alleviate pains of the extremities,
and

and other parts distant from that organ, very expeditiously, as well as procure sleep.

If then we take the influence sedatives have on the common sensorium, and the irritable power, inherent in the muscular fibres of the system, we shall be possessed of the most certain known idea of the operation of medicines of this class; and be furnished with the knowledge *where, how far, and in what mode*, the application of these substances may be serviceable, or hurtful, in so far as they act as sedatives; but it must also be remembered, that some of them are stimulants.

Hence then, in all cases where there is too great a rapidity in the circulating fluids, or pain, or spasm from an inflammatory cause, they would be hurtful, otherwise they are in general serviceable. In cases also of infarction, or strong obstruction, which sometimes happens in the lungs, though attended with spasms, they must be cautiously used. But where neither of these objections occur, they may be allowable, and attended with use in diminishing the force and celerity of the blood's motion, where morbidly augmented, or the impetus of the blood against parts similarly affected, in abating violent pain, and procuring sleep in cases of preternatural watchfulness, in restraining inordinate motions, and moderating excessive evacuations.

But where the circulation is preternaturally languid, or there is a lethargic or drowsy disposition, or a high degree of torpor in the system, to them in these cases we should not have recourse.

According to the purposes they have been given to effect, they have received different appellations—it to alleviate pain, *anodyne*; if to abate it by their demulcent power, *paregoric*; if by bringing on stupor, *narcotic*; if by inducing sleep, *hypnotic*; however, their action is similar, and requires no such distinction. They are more properly divided into such as produce sleep, as opium, henbane, poppy; and such as alleviate from their cooling property, as neutral salts, acids.

Our catalogue of SEDATIVES, of which opium is the principal, consists of

POPPY—Syrup of,	2 drams to 1 ounce or more.
OPIMUM—purified,	from 1 to 2 grains.
Tincture,	{ as a sedative, from 5 to 10 drops— as procuring sleep, 10 to 25.
Camphorated,	
CICUTA—Hemlock,	from 5 to 60 drops.
Infused juice,	2 grains and gradually increased.
Powder,	

HENBANE—

Powder,
Extract,

TOBACCO—

Smoke,
Infusion;
Glyster;
Extract,

} 1 grain to 5 and more.

} See page 155.

Of all these medicines, however, we think it necessary to give a more particular account—and, first;

The POPPY HEAD is in use for making a syrup, possessed of virtues to relieve pain; and procure sleep—for these purposes, it is chiefly given to children, in doses of from half a scruple to half a dram or more; and it will be efficacious sometimes, where opium and its preparations are apt to disagree with the constitution.

It is also used for making fomentations for alleviating pain, particularly after proper evacuations in inflammations of the eyes and breasts.

OPIMUM is *anodyne*, from its relieving most painful affections—*hypnotic*, from procuring sleep—*incrassant*, from thickening the humours—*diaphoretic*, from increasing perspiration; and, joined with ipecacuanha, antimonials, camphor, volatile salts, and such like, the most powerfully so of any medicine with which we are acquainted—*sedative*, from allaying the too great irritability of the nervous system—and the most efficacious *anti-spasmodic* in the materia medica;—taken in too large quantity, it renders the nervous system so totally insensible; produces such general relaxations, that lethargy, convulsions, and death, are the consequences; but, in a variety of cases, given judiciously. it is one of our most noble remedies, particularly where nervous incitability, or thinness or acrimony of the humours are too prevalent in the constitution, admit too great degree of fever, or heat, or fixed obstructions, do not contra-indicate its use.

Hence the benefit arising from its administration in hysteric and hypochondriac diseases; in convulsions from violent pain; in too great watchfulness, at the latter end of fevers, small-pox, and measles; in coughs, from acrid, stimulating defluxions; in looseness, and dysenteric complaints, called bloody fluxes, very often. It has been said to cure the venereal disease. That in irritable habits it assists the operation of mercury, by preventing the too powerful exertions of mercurial stimulus, alleviating pain, and promoting insensible perspiration, will not be denied; but it

being of itself curative, I cannot believe—though, after the humours have been rendered too thin and acrimonious by the use of mercury, I will not dispute its power; for I have seen its good effects in totally removing what have been called rheumatic pains from that source.

Asa-fœtida joined with opium is said to weaken its narcotic effects, and prevent that stupor, heaviness, and vertiginous affections, which opium is apt to occasion after its operation.

Besides, this medicine not only alleviates pain, and takes off spasmodic affections, when administered internally—but when applied externally, as in fomentations, cataplasms, lotions, liniments, or injections, it produces the same consequences.

HEMLOCK has been used much in scrophulous, schirrous, and cancerous cases;—in the last highly recommended by Dr. Storck, as a successful medicine, though not answering the expectations of the physicians of this country; notwithstanding which, I hesitate not to declare, I have found it in some degree serviceable in schirrosity—in scrophulous tumours, joined with bark, it has been useful; as also in ulcers, and foulness of the bones from that cause; in some obstinate rheumatic cases it has been efficacious, and I have evidently seen it produce good effects in the chin-cough. Joined with mercury, it has been useful in venereal complaints, and has been successfully given in some cutaneous disorders.

It is commonly given in doses from four or five grains to a scruple, and pushed on to one or two drams in twenty-four hours half an ounce has been given in that time; and, in one or two cases, Dr. MONRO says, he has known an ounce. However, Dr. CULLEN remarks, and that with great propriety, that if some sensible effect is not perceived, when the dose is about twenty grains, he should dispute the goodness of the medicine, and have recourse to different parcels of it.

HENBANE. This has been considered as a narcotic, not producing heat like opium; and, besides, it is, in large doses, laxative—evident advantages over opium. In palpitations of the heart, it has been said to be useful—in cases of mania and convulsions, in doses of the extract from one grain to five. Though STORCK extols the remedy in spasmodic affections, and profuse bleedings; yet, from Dr. HOME's experience, it appears in these affections not to produce any good effects. It seldom produces sleep, or alleviates pain, except till the dose is arrived at eight or ten grains, nay, often it has been obliged to be increased to fifteen or twenty; though, in full doses, it is more apt to occasion delirium than opium. Sometimes it will agree where opi-
um

um will not ; and it is not, except in large doses, that its aperient effects are very remarkable.

From a case related by Sauvages of its curing a cataract, I once, under those circumstances, tried it with evident utility ; but during the trial, my patient left town, nor have I heard what was the ultimate result. However, such were its effects under my inspection, that I should, in all cases of recent cataractous appearances, recommend the trial.

TOBACCO, though in common use, and certainly considered as a luxury, from being chewed, taken in snuff, and smoked for pleasure, is a deleterious and noxious herb, possessed strongly of those powers producing stupor ; hence considered as a narcotic. It is highly stimulant, a powerful emetic, purgative, and promoter of the salivary discharge ;—applied by way of poultice to the stomach, we are told it excites vomiting, and produces the same effects applied to wounds. In the iliac passion, incarcerated ruptures, and obstinate costiveness, thrown up into the bowels, by way of smoke, or in strong infusion, it has proved efficacious—and also in cases of worms, particularly those very small white worms, called *ascarides*, which affect the lower part of the large bowel, called rectum, occasioning itching in the anus :—Indeed, it is said that no remedy is more powerful in opening the bowels, procuring stools, and in destroying and bringing away these worms than this—though it must be observed, that given in this method, it will often produce great sickness and vomiting, especially if pushed far into the intestinal canal.

In Sweden it is a domestic medicine, and often given to vomit and purge, in the beginning of putrid fevers. An extract made of it, which renders it more mild in its operation, has long been used in Germany as a pectoral in coughs—and, of late, in this country, recommended as a powerful diuretic, and of great use in dropsies ;—but its inefficacy in small doses, and from its producing severe sickness and vomiting, in large ones, such as were sufficient to make its diuretic effect apparent—from the nauseousness of its preparations, and the roughness of its action ; it has not yet been brought into general use internally. Externally applied, BERGIUS considers it as efficacious in discussing that tumefaction of the prepuce (55) called phymosis.

§ 4. ERRHINES. This class of medicines, so called from the Greek *en* in, and *rin* nasum, the nose, or STERNUTATORIES, from producing sneezing, are all such as stimulate the internal membrane of the nose, occasioning a flow of mucus from thence, or causing that action from whence they derive their name.

They act altogether by their stimulus ; and though they have

been said to have effect upon the fluids. they do it in other way, than by increasing the action of the solids on their continued liquids. Indeed all evacuants are general stimulants. Even these medicines carried into the stomach, or thrown upon other parts of the machine, would produce such effects as were consistent with their irritating power, and might vomit, produce gentle sweat, or urine, or become expectorant, according to their elective properties.

The use of these medicines, though much insisted on by the ancient, have, by the moderns, fallen into neglect; though they may in some cases certainly be of no small service, either in unloading the parts contiguous to the nose, or removing obstructions by the shocks given to the system in sneezing.

Where the mucus secretion is defective in the nose, producing a morbid diminution, by determining the fluids there, they might be of service; or by occasioning a derivation from parts morbidly affected in the neighbourhood of that organ—also by agitating the system in general, and by obviating nervous affections of the convulsive or spasmodic kind—but where there is great fullness of the habit, morbid debility of the viscera, uncommon sensibility of the nose, or ulcerations of that part, and those which are contiguous, the use ought certainly to be forbid.

From considering the operation of these medicines, and the effects likely to be produced by the application, we may learn how they become useful in rheumatic affections of the head; for temporary relief has not only been acquired by them, but the rheumatic disposition conquered—the tooth-ach also, and other rheumatic affections. In chronic and long-continued inflammations of the eyes. in opacities, or cloudiness of that part of the eye called cornea, beginning cataracts, and in some cases of deafness.

In some complaints of the head of the spasmodic kind, they promise much utility; but in all full habits, or in cases where there appear any preternatural load in the head, they are not only doubtful, but may sometimes become dangerous.

And notwithstanding it has been asserted, that their use tends to remove lethargies, epilepsies, palsies, apoplexies, head-achs, vertigos, catarrhs, gutta, serena, &c. and may, in some particular species of these complaints, where the nervous system is primarily affected, be attended with no small advantage; still should there be fullness of habit in people thus afflicted, prudence should direct us to have that fullness taken off before the application of sternutatories. During their use, we should carefully avoid cold, for that has sometimes produced displeasing effects; —they

—they should also be administered at intervals of one or two days, and then the patient should be kept warm. From the general shock they give to the system, they have been said to be more beneficial than vomiting, and hence also greatly useful in removing the remotest obstruction.

ERRHINES consists of two classes—

MECHANICAL,

MEDICINAL.

The FIRST are, dust—feathers—animalcules irritating the membrane of the nose, and blood accumulated, either from obstruction or inflammation—whence it happens that in a beginning catarrh, the mucus of the nostrils usually flows pretty plentifully.

The SECOND—

Hyssop
Savoury

Bete

Betony

Marjoram

Assarum

Herb Mastich

Tobacco Snuff

White Hellebore

Orrice-root

Pellitory

Pepper

Euphorbium

Turpeth Mineral

Corrosive Sublimate.

The first are esteemed the mildest, the seven succeeding more active, and the three last the most violent in their operations;—but corrosive sublimate is considered as invested with the most superior power; for patients who have applied it, have sneezed for some hours, although it has been used in very small quantity.

There are different ingredients added together to form HERB SNUFF,

As the dried leaves of Asarabacca

Sweet Marjoram

Syrian Herb Mastich

Dried Lavender Flowers—

equal parts of each—but three parts of assarum and one of marjoram, beat into a fine powder, are superior to most of those sold under the name of HERB SNUFF—and indeed are the more agreeable and efficacious errhines. If taken to the quantity of five or six grains at bed time, they are said to operate the succeeding day as a powerful sternutatory, inducing frequent sneezing, but still more a large discharge from the nose—and are often employed with great advantage in cases of obstinate headaches, and inflammations of the eyes, resisting other modes of cure.

Some-

Sometimes in obstinate deafness they have been given with success, with the addition of a small portion of turpeth mineral, and repeated at shorter or longer intervals, in proportion to the effect they produce of greater or less violence in their operation.

§ 5. SIALAGOGUES—derived from the Greek words, *salen*, saliva, and *ago duco*, to draw forth, comprehend all such medicines as produce a flow of saliva into the mouth, from the glands named salivary, there situated.

They have been divided by some authors into three classes.

The FIRST—such as immediately act upon these glands, as fomentation, friction, and suction, either internal or external of these parts;—hence, moreover, cataplasms applied to those glands, called parotid, from their situation under the ear, and chewing tobacco moisten the mouth;—all pungent stimulants also.

The SECOND, are all such as occasion a flow of saliva into the mouth, by intercepting a flux of moisture into other parts; for it is observable, that if any of the viscera should be obstructed, as the liver, spleen, pancreas, at the same time the kidneys, or intestinal ducts, then is the mouth always moist—whence hypochondriac people are called SPUTATORES, from their spitting so much; and, therefore, whatever prevents a secretion of lymph in those places, should be esteemed sialagogue.

The THIRD CLASS takes in all those substances which are supposed to break down the sanguinary mass, and by that means supply the mouth with too great a proportion of fluids, thus dissolved.

Of this tribe quicksilver is the principal, and may be applied in various modes.

From its external application a salivation may be raised, though in its crude state—but it may be applied in form of liniment or fumigation; for if twelve grains of quicksilver are placed upon a fire, or a heated iron, they will emit a smoke, which, received by the nostrils, in two or three days will occasion a spitting. It may be taken internally with the same intent, and succeed, if given in a small quantity; but if in too large, it is apt to pass off by the bowels; if handled much, and for a long continuance, similar effects will be produced, as we learn from gold-beaters, who make great use of quicksilver, falling into salivations.

Quicksilver formed into a salt by sublimation, if taken in small doses, if applied externally to wounds or ulcers, or if attracted by the nose, has similar consequences, from its reception into the habit.

It was the opinion of BOERHAAVE and others, that all these effects were produced by dissolving the fluids, either by its mechanical action, or by its dissolving or putrescent power.

Had not these doctrines been previously refuted by such arguments as are uncontroversial, from the considerations, that mechanical force never divides mixts, but aggregates only; that, from the minuteness of the division of gold, even it may be made to become incapable of overcoming the cohesion of water or spirit of wine, and be suspended in them—and also that the smallness of the quantity introduced would be inadequate to produce the effect. And, *with regard to its dissolvent or putrescent power*, that, during the operation of quicksilver on the habit, no symptoms of putrescency appear in any part of the system—that there is no alteration of the blood in that respect during a salivation, but its texture appears as strong then as at any other time;—that salivation is attended with an inflammation, and the blood shews an inflammatory crust; and, *finally*, that after the operation of the salivation is over, no taint appears in the blood, but, on the contrary, the person is in better health than before, and gives marks of a firmer state of it;—one single instance would be sufficient to overturn them; if we consider that a few grains of calomel has in many constitutions raised a salivation very suddenly, which has continued for some days, nay weeks. Instances of which have fallen within the course of my own observation.

I cannot myself doubt of its producing its action in the salivary glands by the means of its elective stimulus, though it is capable of exerting its stimulus in other parts of the machine, as on the stomach, intestines, kidneys, and perspiratory vessels, producing, according to the parts affected, vomiting, purging, discharge of urine, and gentle perspiration.

Indeed, upon the whole, it should be considered as a stimulant in general, in particular, a salivary one, and an evacuant, more peculiarly of the serous or lymphatic fluid, or both; and one of the most universal aperients and deobstruents we have in the whole catalogue of the materia medica.

In its combined state, forming metallic salts, quicksilver sooner exerts its activity on the system, but less certain, I think, in its effects;—it appears more efficacious, having its parts only divided by some unctuous or oleaginous substances; and, perhaps, its virtue depends upon its being so entirely unconquerable by the assimilating powers of the constitution, and capable of such minute divisibility, for it will pass through any body except glass.

Quicksilver, though here ranked as an internal sialagogue, or a promoter of the excretion of saliva, because its elective power seems to be more determined to the salivary system, than any other part of the machine, may fairly be considered as an univer-
sal

sal stimulant, deobstruent, purgative, and general evacuant, increasing the whole of the excretions of the human body.

It was thought that, from the great discharge it produced from the salival glands, and the sceter accompanying it, that it dissolved the texture of the blood, and disposed it into putrid acrimony; but experience proves the case to be far otherwise, as we have proved above.

The great effects produced by quicksilver seem to proceed from its increasing the whole of the animal excretions, and thus carrying off the virus of the pox, for the cure of which it is the most remarkable and certain;—and, indeed, it has been, and still continues to be, by many, considered for this disease a SPECIFIC;—but as it will not, by itself, in all cases, cure that complaint, nor prevent the venereal poison from taking effect; even in constitutions loaded with it, that idea must fall to the ground.

Though quicksilver, in its original state, is inactive respecting the human machine, and only has been given in this state to conquer obstinate obstructions of the intestines; though inefficaciously, still from mechanical division, as united with viscid, oleaginous, or unctuous substances, rubbed down with dry powder calcined, or united with different acids; forming mercurial salts; it has been rendered extremely active; and though preparations of this abound, the chief use are confined to a few.

GUMMOUS mercurial pill,	from 20 to 30 grains.
MERCURIAL pill,	from 8 to 12 grains.
QUICKSILVER acetated,	from 1 to 6 grains.
Calcined,	from $\frac{1}{4}$ of a grain to 2 grains.
Muriated, or corrosive sublimate	} from 1-8 of a grain to 1 grain.
Mild muriated	
CALOMEL prepared,	} 1-2 a grain to 2 grains or more.
QUICKSILVER with chalk	
White calx of quicksilver, or white precipitate,	} too acrid for internal use.
Sulphurated quicksilver, or æthiops mineral,	
Red sulphurated quicksilver, or factitious cinnabar,	} from 10 grains to 40.
Red nitrated quicksilver, or red precipitate,	
Vitriolated quicksilver, or turpeth mineral,	} used chiefly in fumigation.
Quicksilver ointment,	
	} used as a destroyer of fungous flesh, or for dressing venereal ulcers.
	} from 1 grain to 4.
	} from external use—from 1-2 a dram to 2 drams.

Now several of these preparations are appropriated to different purposes. The Milder sort, as *alterants*—

Gummous pill	Acetated quicksilver
Mercurial pill	Quicksilver with chalk ;

or the more active preparations in very minute doses, which in this view are considered as the most efficacious.

As a purgative, *calomel* claims the preference, joined with rhubarb or some other of that class—in doses of from 3 to 8 or ten grains ; and in smaller doses as deobstruent and alterant.

In venereal cases, the gum and mercurial pill—calomel—corrosive sublimate dissolved in brandy—calcined mercury joined with opium---are chiefly had recourse to.

Against the itch, the white precipitate, made into an ointment.

The quicksilver ointment is also used for raising a salivation where thought necessary, or loading the constitution sufficiently without producing that effect, for the cure of venereal complaints.

Indeed calomel, and some other of the active preparations, have proved efficacious in the early stages of inflammatory complaints of the breast, brain, pleura, &c. when given freely. in repeated doses, sometimes with, sometimes without opium ; which has been, in these cases, rendered more effectual by joining small doses of the antimonial powder along with it. In spasmodic complaints, united with camphor and opium, they have been said to be effectual---as also in dropical cases, given in conjunction with diuretics and aromatics, particularly the squill pill. But these we shall particularize more minutely when we come to treat of diseases to which they are appropriated.

Now, from keeping in view the peculiar virtues of this medicine, the reason will readily occur why in a variety of complaints it is so beneficial---as in the venereal disease---glandular obstructions---cutaneous complaints---obstructed menses---dropsy---worms---some inflammations of the lungs and other parts, properly applied, and judiciously united with other well-adapted remedies.

Thus much have I thought requisite to say relative to this so extensively useful a remedy ; though in this place we should consider it merely as a promoter of the salivary discharge, in order that we may be better prepared for discovering its utility in a variety of different cases, on which we shall in future treat. Here it stands as a sialagogue, and the only internal one of which we make use—the others in this catalogue are filed topical, from

their promoting the flow of saliva from external application—the principal of which are

Squills	Cloves
Tobacco	Madder-wart
Angelica	Pellitory.

From what has been said, we shall readily discover their utility to consist in diminishing the force of the blood against parts morbidly affected in the neighbourhood of the salivary glands; and also the action of the vessels when morbidly increased in the neighbouring parts, as in some cases of tooth-ach and rheumatic affections; and in promoting the circulation of the blood freely through the salivary glands when morbidly obstructed there:—Besides, as they so freely promote evacuation, they will be beneficial in evacuating morbid accumulations of serum; in producing a thorough change in the fluids of the body when morbidly vitiated.

But when there appears to be an uncommon determination to the salivary glands—any præternatural sensibility in the glands—when the serous part in the circulatory fluids is defective—or there is a high degree of inanition, or general debility of the system, we must avoid using them.

§ 6. **EXPECTORANTS**, so named from the Latin word *expectora*, to throw out of the breast, or expectorate; and are all such substances as expel morbid matter through the windpipe adhering in its branches, called bronchia (28, 29.) of the lungs.

To promote which purpose, several particulars are necessary to be observed. It is required, **FIRST**, *that* the matter contained within them should be rendered moveable, and capable of being expectorated, taking care that the most fluid part should not be dissipated, lest the remainder should be left too viscid, and not easily pumped up from the lungs;—hence medicines to heating and stimulating are hurtful;—**SECOND**, *that* the passages of the lungs should be open, cleansed, and lubricated;—**THIRD**, *that* the excretion of the offending matter should be promoted, which is best performed by coughing, to which end proper stimulus, and proportionate strength are required;—**FOURTHLY**, *that* the obstructed vessels should have rest, by which means they may be relaxed—for should they be continually irritated, the humour from the glands of the windpipe would be ejected with a sort of pain.

To accomplish the **FIRST** intent, all aromatic bitters, and, at the same time, mild oleaginous substances are necessary, such as hore-hound, hyssop, clecampane, pennyroyal, valerian, &c. and sulphureous medicines mixed with alkalies—all fixed saponaceous materials, as Venice soap in pills, or mixed with milk;—all

all volatile oily soaps, and volatile fixed salts, and, in general, all diluents and stimulants mixed together.

For the **SECOND** purpose, we must apply to aperients and detergents, as oil of poppies, almonds, olives, honey particularly, as it is aperient, inciding, attenuant, detergent, and lubricating---here also belong emulsions, soaps, yolks of eggs, with oily substances, saccharine substances, at least in small doses; likewise balsams, as that of turpentine, Peru, Gilead, Copaiva, &c. which act both as stimulant and lubricating---to these we may add all relaxing and emollient decoctions.

For the **THIRD** are useful all those which excite a cough, as wine, vinegar, acrid spirits, sternutatories, squills, gum ammoniac, &c

And, for the **LAST**, demulcents, anodynes, and narcotics, are proper, of which the principal is opium; for when the windpipe is once excoriated, it is easily thrown into violent spasms, and cough, which cannot be restrained by that powerful sedative.

However, we may in general observe, where there is no inflammatory tendency, and the moving powers are torpid, some of the stronger stimulants are extremely useful, and are the things which chiefly contribute to promote expectoration; but they should be very cautiously used in diseases of the breast, and particular care taken, that the habit be free from any inflammatory disposition, or, at least that no inflammation is fixed there---for where these take place, relaxing the vessels, and taking off the spasms is all that is wanted, for in such constitutions the mucus itself supplies sufficient irritation, either from its acrimony or weight, or distension of the cells of the lungs.

From what has been said, the utility of expectorants appears---when the secretion of mucus in the lungs is obviously diminished, by promoting that secretion, and rendering the mucus thinner, when too thick or viscid---where the excretion is insufficient, by evacuating morbid accumulations of mucus in the lungs, and supplying irritation to that organ when defective.

When the lungs labour under a state of morbid insensibility, by removing that, and promoting a free circulation through them, when it is there morbidly impeded.

But when there is a high degree of increased sensibility in the lungs, and an uncommon quick excretion of mucus from them, the stimulant expectorants ought to be prohibited; and when there is too great a state of torpor, of the relaxing ones we should by no means make use.

Our general catalogue of **EXPECTORANTS**, of which we shall furnish, for the reasons above advanced, a proper division, consists of

Hyssop,	Hore-hound,	Gum Guaiacum Squills
Ground-ivy,	Pennyroyal,	Myrrh
Colt's foot,	chiefly used in infusion or decoction, and sweetened with honey	Asafœtida
Garlic		Gum Ammoniac
Mustard		Opium
Horse-radish		Tobacco smoke
Onions		Acid vapours
Leeks		Blisters
Balsam of Copiava		Warm baths to the feet
		Watery vapours received into the lungs.

Now, as we find expectoration is to be promoted by different means, agreeable to the cause acting in the lungs; and as our selection here has such different properties, all of which are calculated to promote the desired end by judicious application, a division of them, agreeable to their powers, becomes necessary. FIRST, into such as act by stimulating the lungs taken internally.

The infusions of Hyssop,
Ground-ivy,
Hore-hound,
Coltsfoot,
Pennyroyal, made into tea, and sweetened with honey.

GARLIC,

Mustard,
Horse-radish,
Onions,
Leeks,

BALSAM Copiava,
GUM Guaiacum—

Powder,

Tincture,

—MYRRH—Powder,

{ a clove of it taken now and then in substance, formed into pills, or made into syrup.

{ eat plentifully with other viands.

Dose, 20 to 40 drops on sugar.

from 6 to 20 grains.

1-2 a dram to 1 dram.

10 grains to 60.

SECOND, such as act from taking off spasmodic affections—

ASA fœtida

GUM Ammoniac,

OPIMUM

BLISTERS,

WARM baths to the feet,

WATERY vapour inhaled into the lungs.

{ See catalogue of Antispasmodics.

See Sedative.

THIRD, such as irritate—
TOBACCO smoke,

ACID VAPOURS.

FOURTH, such as lubricate and relax. See the catalogue of Demulcents, all which belong to this place.

§ 7. EMETICS. This is a Greek word, from *emeo*, vomo, to vomit; by the Latins they are called *vomitória*, and are all such substances which, by their action, cause the stomach to reject its contents upwards.

The effects produced by this action have been divided into eight heads; in considering which we shall be enabled to perceive the utility to be derived from the application of these remedies; on which, as we go along, we shall furnish some remarks necessary for the more clear elucidation of different parts of the subject;

FIRST. “ Vomiting evacuates the contents of the stomach itself; though it is not easy to know when that is fully performed. Many have got into a method of promoting few repetitions in vomiting, and giving small ablutions; but it has by others been thought that frequent ablutions are required to clear the folds of various matters, or mucus, which may be detained within them.”

If we wish to evacuate the contents of the stomach completely, frequent and copious ablutions are certainly right; but it is sometimes necessary to give gentle shocks only to promote some particular purposes, and these must be often repeated, so that it would be hurtful to push vomiting to its extent, as, from violent straining of that organ, it would become too relaxed, and our intent frustrated; for it is from the repetition of the operation gently, not from unloading the stomach, success is expected.

SECONDLY. “ Vomiting causes a flow of liquids to the stomach, clears it, and emulges its mucus glands.” And,

THIRDLY. “ It not only emulges the mucus follicles of the stomach, and promotes a flow of gastric liquor, but has the same effect on the neighbouring glands, especially the sweetbread and the liver.”

FOURTHLY. “ Whilst the vomiting continues, it not only inverts the regular motion of the stomach, called *peristaltic* but also of the intestines, which pour out their mucus to be carried to the stomach, and evacuated with its contents.

“ Hence do we find vomits useful in loosenesses and dysenteries; but, independent of that, they are beneficial, more probably, as purging the intestines, occasioning a greater flow of liquors into the intestinal canal. If the vomiting ceases, the increased secretion is carried off by stool, so that at any rate the adherent foulness

foulness is washed away, by squeezing the tract of the intestines."

FIFTHLY. " Vomiting squeezes, and occasions a constriction of the whole abdominal viscera, especially the mesenteric glands, (46) and in consequence pumps the whole Lymphatic system;—on this account increases absorption, as well as from its evacuating property; hence for these purposes emetics answer equally well with purgatives, and may be useful in dropical cases."

But here we should be careful no strong visceral obstructions hath taken place, or any great acrimony in the humours, and tenderness of the vascular system, for in these cases they may be productive of the most fatal effects.

SIXTHLY. Dr. Cullen thinks, " vomiting has the power of affecting the kidneys, for as irritation of the kidney will produce vomiting, so, on the other hand, it is reasonable to think, that vomiting may also act upon the kidney—hence it would seem useful in propelling stones in the kidneys."

Notwithstanding some have recourse to such a practice, and it appears imitative of nature, still I should conceive it *must* always a dangerous experiment, *always* doubtful, and *often* not necessary; for if the stone should be so impacted with the kidney that it cannot pass, irritation on the part would be strongly increased, of course pain and inflammation in similar proportion, most likely abscess, and their consequences. Besides, we can never be certain whether the stone is of such a size as to pass through the ureters (50) by any propulsive force; and if it should, by relaxing the ureters as much as we can, by proper remedies, we are more likely to produce the effect, and certain to avoid all danger from too rash a practice;—however, if the attempt at propulsion was to be made, every means should be previously used to render the passages as distensible as possible before the trial:—but of this we shall have occasion to treat more fully in future.

SEVENTHLY. " But the effects are extended, perhaps, to the viscera of the chest, as expectoration has been promoted by vomiting."

EIGHTHLY. " It also increases the constriction of the fauces, and forcibly emulges the whole of the salivary glands. It has had the effect of those medicines called masticatories, which, by chewing, and increasing a discharge of saliva, relieve rheumatic affections of the head, tooth-ach, &c.

" By preventing inspiration, vomiting occasions a regurgitation of the blood at the end of expiration. The accumulating blood, which usually happens, produced by vomiting, is only momentary, and may be soon counterpoised, as will be seen by considering its advantageous effects on the system in general.

" During the time of vomiting, the pulse is small, weak, and inter-

intermitting; but when it is over, if the stimulus continues, the circulation is increased, a fullness and softness of the pulse, a determination of the fluids to the surface of the body, and sweat;—this last may be supposed to proceed from an increased circulation, but Dr. Cullen thinks it may also from the consent of the stomach and surface, and that antispasmodic virtue takes place with regard to the extreme vessels, which is illustrated from this; that emetics combined with other antispasmodics, (148) as opium, increase the power, so that combined they become more efficacious diaphoretics,” or *promoters of insensible perspiration or sweat*, “than each when alone.”

These are their primary effects, which, if we consider closely, will be productive of a variety of others, infinitely a greater number, than by any class of medicines with which we are acquainted; and indeed from them I have seen the most serviceable consequences accrue. Not but I think their use, in many cases, should be considered with the nicest caution; for advantageous as they are, when properly applied—in the hands of ignorance, or inconsiderate rashness, they become too often fatal.

If we consider the general shock which emetics give to the system, the evacuations they produce from the stomach, and the effects they have upon the nervous power, we shall be convinced of their utility; by restoring equality to the circulation, producing lymphatic absorption, and removing obstructions in the system of blood vessels—and in these senses they may be considered as *irritators of the habit*;—as *evacuants*, from clearing the stomach of its contents, and morbid accumulations of secreted matters lodged there, and discharging also serous accumulations in different parts of the machine:—as *antispasmodics*, from stimulating the nervous system, and the moving powers through the machine in general, and also obviating violent affections of the nervous power.

But in all cases of ruptures, or relaxations of containing membranes—in local inflammations of the internal viscera—a high degree of morbid debility in these—and in fixed obstructions, unconquerable by the force of the circulation, it has been advised that their use should be avoided.

Still, notwithstanding all these prohibitions, so apparently well founded, from the consideration of the action of emetics, yet they have been administered in cases of schirrhous viscera, in local inflammations, and supernatural effusions of blood; though in the two latter they should never be attempted without first bleeding; though perhaps hæmorrhages may *now and then* require this operation; but of these there are very rare instances,

as they are almost constantly attended by an inflammatory disposition of the constitution.

In all congestions of the head, they are said to be dangerous, in apoplexy, palsy, and in smaller collections in the veins of the brain. They would, doubtless, be extremely dangerous where these maladies arise from too great sanguinary plenitude; but where from mere weakness of the nervous system, or inability of the moving powers, I should prefer their use to other remedies, at least on their first appearance; nor should I hesitate in prescribing them in ferous collections, where I was not afraid of any great relaxation of the vessels, or system of the solids.

The class of EMETICS in use are not numerous—indeed, three or four, where we consider their action only in this point of view, are sufficient, arranging them according to their mode of operation, or peculiar appropriation.

If expeditious vomiting is required, without much regard to more extended action,

White vitriol,

Dose, from 10 to 20 grains.

Blue vitriol,

2 to 6 grains.

Infusion of tobacco,

{ 1 ounce to a pint of boiling water—1 ounce or more to a dose, will be sufficient.

If something more is wanted, particularly a determination of the fluids to the skin,

Tartarized antimony,

Dose 1 grain to 5.

Antimonial wine,

3 drams to 6.

Wine of tartarized antimony

1 dram to 2.

Ipecacuanha—Powder,

5 to 20 grains.

Tincture,

2 to 12 drams.

And in venereal cases,

Vitriolated quicksilver, or } Dose 1 to 4 grains.
turpeth mineral

In large doses, some of the vegetable bitters and cathartics come under this class, as do also squills, asarabacca, fox-glove, mustard, and house-radish. Strong infusions of the two last are given with success in torpid, cold, phlegmatic habits.

Systematic writers hence, from their peculiar power, have divided them into

IRRITATING EMETICS—as

Tartarized antimony,

Vitriolated zinc, or white vitriol,

Quicksilver, or turpeth mineral.

EVACU-

EVACUATING—as

Ipecacuanha, — Afarabacca, — Squills.

HEATING—as

Mustard, — Horse-radish.

NARCOTIC—as

Tobacco, — Fox-glove.

§ 8. The next set of medicines in our catalogue are CATHARTICS, so named from the Greek word *cathairo*, purgo, to purge, and comprize all such medicines as evacuate by stool.

Purging, says BOERHAAVE, is an evacuation of all those things which can be thrown out of the body by stool from any part of the machine. And most authors have been very prolix on this subject, as the operation seems to be, and really is, of such material consequence to the constitution.

However, we shall content ourselves with a more concise view of their effects, and from thence be sufficiently empowered to deduce their utility.

By their operation they unload the intestines, and increase the motion of the bowels downwards; by which means they clear the intestinal glands, and derive a greater quantity of liquids; into them; they also empty the stomach downwards; they evacuate the pancreas and liver, and affect the spleen, and all the viscera of the lower belly; they promote the absorption of watery and other thin fluids, stagnating in any cavity; and, by continuance, purge the whole body; but in this last case induce debility, if too long persevered in; hence are preferable to other evacnants.

They are apt to produce inflammation in the parts on which they immediately act. They cause revulsion from the head, by determining the blood into the large artery of the body, called the *descending aorta*, (29, 30) and hence may be useful as promoters of the menstrual discharge, washing of virulence in gonorrhœa, in ulcers, by evacuating the system in general; and in those of the inferior parts, by causing a greater flow of liquids to the part. They excite, or, at least, increase inflammation in the intestines; nay some propagate the same over the system; and, when thrown into the blood, are most of them expectorant and diuretic, causing evacuation of phlegm from the chest, and urine through the kidneys.

Now these purgative effects are produced chiefly by such things as irritate the fibres and muscular parts of the intestines; but *passions of the mind* will also promote intestinal discharge; and some will have that occasioned from *smell alone*, others from *external application*, some *from the diminution of insensible perspiration*, but this happens in a moist thick atmosphere, and others

from eternal motion, as that of a ship or carriage;—upon the whole, it is tolerably conclusive, that purging arises from intestinal stimulus, either mental or corporeal.

But, notwithstanding the use of purgatives are so very salutary in their different degrees, according to the causes requiring them, yet, by being too frequently renewed, they are apt to weaken the tone of the intestines, and indeed their sensibility. Hence are produced, if we add the consequences of evacuation, often irregular spasmodic affections.

Dr. CULLEN says, that all purgatives are endowed with an inflammatory acrimony, not only exciting it in the part to which they are applied, but acting in the same manner, as poisons; their stimulus, extended to the system, produces and aggravates fever, and an inflammatory disposition; and as it is chiefly directed to the rectum, they increase the piles, and extend their irritation to the passage from the neck of the bladder, called *urethra*.

We are led to discover, from the concise view we have taken of the subject, from whence their utility arises;—FIRST, as *evacuants* from removing any morbid retention of the contents of the stomach and intestines—diminishing the quantity of circulating fluids, when too abundant for the state of the system at that time—and carrying off morbid accumulations of serum. SECONDLY, as *stimulants*, by promoting the free circulation through the intestines in those cases where it is morbidly impeded—diminishing the force of the blood against parts morbidly affected—removing torpor in the muscular fibres of the intestines—and restraining inordinate motion in these muscular fibres, by stimulating them to regular and more constant action.

But we find that some of these have, besides the powers enumerated, those which are *cooling*, *astringent*, and *emollient*.

Hence, should there be in the bowels any high degree of irritability, and the circulation should there be morbidly accelerated, of the *stimulating class* we should make no use—if the circulation should be uncommonly slow and languid, those which are styled *cooling* will be improper—if habitual costiveness be an error of the habit, the *astringents* must be wrong—and where uncommon relaxation of the intestines is prevalent, the *emollient* ought not to be applied.

The whole catalogue of PURGATIVES are EVACUANTS, and in this view differ only in degrees of power. The MILDEST of which are all acceſcent fruits.

Of the SECOND ORDER are

Tamarinds, Cassia, Sugar, Honey, Manna, Water drank
copi-

copiously, Milk whey, Butter-milk, Spinage, Bete, Cabbage, Succory, Dandelion, Endive, Lettuce, Celery, Alparagus, Artichoke, Mushroom.

Of the THIRD

All mild animal and vegetable oils, Venice Soap, Mustard, Sulphur, Animal Bile, Gum Guaiacum, Tartar, fixed alkaline Salts, neutral Salts, Magnesia, *if it meets with an acid*, not otherwise.

Of the FOURTH—or more acrid,

Aloes, Rhubarb, Senna, Jalap, Scammony, Buckthorn Berries, Gamboge, Hedge Hyssop, Bitter Apple, Wild Cucum-ber.

Of the FIFTH—or most acrid,

Solutions of Gold or Silver in particular acids ; but these, from the violence of their effects, are out of use.

Emetics also got into the bowels prove purgative.

But as we find great use may be derived from a judicious selection under particular circumstances, we shall pursue the subsequent divisions.

COOLING APERIENTS AND PURGATIVES.

Acescent Fruits

Sugar

Honey

Water drank copiously

Milk Whey

Butter-milk.

Spinage

Bete

Cabbage

Succory

Endive

Lettuce

Asparagus

Salary

Artichoke

Mushrooms.

These may be considered as food proper to assist in promoting the desired purpose.

TAMARINDS—

CASSIA—Electuary,

TARTAR—

purified,

Crystal of Tartar,

MAGNESIA,

taken in ptisan or decoction.
dose, 1 to 6 drams.

} 1 to 3 drams or more.
10 to 30 grains.

NEUTRAL SALTS.

ACETATED Kali, or diuretic Salt, from 1 to 2 drams.

TARTARIZED Kali, or soluble Tartar, 2 to 6 drams.

VITRIOLATED Kali, or polichrest Salt, 1 to 3 drams.

TARTARIZED Natron, or Rochelle Salt,	} 6 drams to 1 ounce.
VITRIOLATED Natron, or Glauber's Salts,	
EPSOM Salt,	} 6 drams to 1 ounce.
SULPHUR—	
The Flowers washed,	from 1 scruple to a dram.
Precipitated, or Milk of Sulphur,	} 1 1-2 scruple to 1 1-2 dram.

EMOLLIENT APERIENTS AND PURGATIVES.

All bland animal and vegetable Oils, the most powerful of which are

CASIOR Oil,	Dose, from 1 dram to 1 ounce.
and, except this, few are given alone with this intent, but only to assist in the operation of other purgatives, where lubricating or relaxing materials are requisite.	
MANNA,	from 1-2 an ounce to 2 ounces.

ASTRINGENT APERIENTS AND PURGATIVES.

Though almost all the smart purgatives leave the body costive after their operation is over, the aloetic medicines excepted, still the restraining power, when wished to succeed, is chiefly confined to

RHUBARB—Powder,	
Russia,	1 scruple to 1 dram.
East India,	10 to 30 grains.
Vinous Tincture,	} 1-2 an ounce to 1 1-2 ounce.
Spirituos Tincture,	
ROSES—Syrup of	} 2 drams to 3 or 4 for children; to adults it is seldom given with this intent.

STIMULANT APERIENTS AND PURGATIVES.

MUSTARD—	
Infused in wine,	a table spoonful gently aperient.
ANIMAL Bile,	1-2 a dram to a dram.
GUM Guaiacum—Powder,	from 10 to 20 grains.
HEDGE Hyssop—	
Powder—Extract,	5 grains to 10.
BITTER APPLE—	
Compound Extract,	10 to 25 grains.
WILD Cucumbers—	
Inspissated Juice,	1-2 a grain to 3.

ALOLS—

ALOES—		from 5 to 15 grains.
Wine of Aloes.		6 drams to 2 ounces.
Tincture of Aloes,		6 drams to 2 ounces.
Aloetic pill with Myrrh,		10 to 30 grains.
SENNA—		
Powder,	}	from 1 dram to 2 scruples.
Ex tract,		
SENNA—Tincture,		from 2 drams to 1 ounce.
Compound Powder,		from 1 to 2 scruples.
JALAP—		
Powder,		10 grains to 20.
Extract,		10 grains to 20.
Tincture,		2 to 3 drams.
Resin,		5 grains to 10.
SCAMMONY—		
Compound Powder,		from 10 to 15 grains.
Powder with Aloes,		5 to 10 grains.
with Calomel,		from 8 to 20 grains.
BUCKTHORN Berries—		
Syrup,		from $\frac{1}{2}$ an ounce to 1 ounce.
GAMBOGE,	{	from 2 to 10 grains—better mixed
		with calomel.

Before we close the account of Cathartics, it may be of some use to observe; that, as in all constitutions, and all diseases where too great an intestinal discharge does not constitute the complaint; and a moderate evacuation from the bowels is absolutely requisite; or in some a more copious one, it is necessary that we should be acquainted with the particular nature of the purgative employed: that whilst we are attempting to be of service, by promoting the intestinal discharge, we may know what fluid each medicine will evacuate the most powerfully, and not in other respects be detrimental to the constitution by an improper choice—as in cases of inflammatory complaints, it would be very injudicious to order purgatives highly stimulant; so in those of bilious obstructions of the liver from thick viscid inert bile, to have recourse to the serous and lymphatic purgatives would be injurious; as by these, though the intention respecting the operation might be right, we should rather increase the original cause of the malady, by an improper election of the medicines of which we made use. However, here we only mention the necessity of such a specification, which we shall point out, on treating of particular defects of constitution, which require the necessary discrimination.

§ 9. **DIURETICS**, taken from the Greek word *dioureo*, permeo, to make water, are all such substances as cause urine to be secreted

secreted by the kidneys, and excreted by the bladder, which last is the repository for that fluid.

Notwithstanding the great labour different authors have bestowed in properly selecting this class of medicines, and the confidence with which many have spoken respecting their operations, still their effects are indisputably uncertain.

How some things pass off by urine so immediately after being taken into the stomach, is still a matter of dispute.

Some astringents have been considered of the diuretic class, from their action; and doubtless have produced this way very good effects, as the leaves of the bear's wortle berry, and bitters; nay some have publicly declared the power of astringents in expelling a calculus. As diuretics act not by dissolving the blood, but by their local or sympathetic stimulus under some circumstances, I see no reason why astringents may not become diuretics in relaxed and torpid habits—many of the operations of the animal economy may be produced by relieving the parts from any defect they may labour under, which defect may retard, or prohibit their action.

Palsy of the kidneys will hinder a secretion of urine; torpidity in those parts of the system, or relaxation, will proportionally weaken their power, which being removed, they will be enabled to act; and certainly astringents bid fair to produce the desired effect. However, in order to be acquainted with their utility, we must now inquire what are the general effects produced on the system by their application;—where there is a superabundant quantity of serous fluids in the blood, and the absorbents appear to be in too inactive a state, they become beneficial, by removing the former, and increasing the absorbent power of the lymphatic system—hence drawing off water accumulated and stagnating in any of the cavities of the body. In scorbutic habits, they remove morbid acrimony from the blood, by carrying off the saline and putrescent particles of the mass of blood, which are generally dissolved in the serous part of that fluid—and when there is a superabundance of circulating liquids too great for the state of the system, by diminishing them they become serviceable—hence we find, their chief action is to promote evacuation.

When the natural secretion of urine is morbidly defective, they restore that secretion, by soliciting a flow of fluids to the kidneys, and hence diminish other secretions when morbidly augmented: and hence remove obstructions in the canals of the urinary passages, and from them wash out all acrimony.

But, in order to promote their operation, they should be given

in the most dilute state; we might say, it is always proper to throw in with them much aqueous fluid, except in cases of dropsy; and, even in this case, there have been cures performed by drinking large quantities of mineral and common water. But where the intention of any medicine is to pass off by urine, the patient should walk gently in a cool air, and avoid all situations calculated to produce a determination of fluids to the skin; for there is so intimate a connection between the kidneys and the skin, that diuretic medicines, when thrown into the habit, will often prove strong promoters of insensible perspiration.

According to the particular nature of the separate action of diuretics, we shall be enabled to judge where they are improper.

Should there be too high a degree of sensibility in the kidneys, a considerable increase of urine, or any fixed obstructions in the urinary passages, the administration of those which are *stimulant* must be disadvantageous.

If there should be a deficiency of serous fluids in the system, the above also are improper, and those of the *cooling class*—but where there is a redundancy of serosity, the prohibition of *diluent diuretics* are fairly pointed out.

Though we know not of any of this class that will always infallibly exert its diuretic power, still the catalogue given us by a variety of authors is extensively prolix;—we shall select such as are considered the most efficacious according to the particular states of the constitutions which may require them;—and these we shall comprise under three heads—of *stimulant*, *cooling*—and *diluent*.

Of the FIRST CLASS, or STIMULANTS, are

Nasturtium
Horse-radish
Asparagus
Turnip
Radish

Onion
Celery
Parsley-seed.
All these may be taken as food, in decoction or infusion.

Fennel-seed

Leek

Garlic,

Balsam of Copaiva,

Hedge Hyssop,

Wake Robin,

JUNIPER BERRIES,

Spirits of,

} See Expectorants.

} See Stimulants.

{ 1 or 2 ounces in a pint of water,
boiled or infused.
from 1-2 an ounce to 1 ounce.

Oil,

Oil,	from 2 to 10 drops.
QUASSIA WOOD—	
Powder,	10 to 20 grains.
Infusion,	{ 1 or 2 drams to a pint of water,
	2 ounces the dose.
BROOM—Infusion,	{ 1-2 an ounce to a pint of water
Decoction,	---dose 1 ounce.
Extract,	1-2 a dram to a dram.
GRASS and ROOTS---	{ 4 ounces to a quart boiled to a
	pint.
WILD VINE---Powder,	15 to 30 grains.
	{ 4 drams to 1 pint boiled down
Decoction,	from 1 1-2 pint---dose, 2
	ounces.
TOBACCO---	See Sedatives.
SQUILLS---Powder,	from 1 to 6 grains.
Fresh Root,	5 to 20 grains.
Pill,	8 grains to 15.
MEADOW SAFFRON---	
Oxymel,	from 1-2 a dram to a dram.
FOX-GLOVE---Powder,	1-2 a grain to 2 grains.
	{ 1 dram to 1-2 a pint of boiling
Infusion,	water---1-2 an ounce to an
	ounce the dose.
BATH WATERS,	{ Stimulant and diluent.
HARROWGATE WATERS,	

The COOLING CLASS are,

NITRE---	from 5 to 30 grains.
Æthereal, or sweet spirit of,	from 10 to 30 drops.
AMBER---Salt,	from 5 to 15 grains.
DIURETIC SALT---	6 or 8 to 30 grains.
FIXED SAL AMMONIAC---	15 to 30 grains.
CREAM OF TARTAR---	1-2 a dram to 2 dram.
ACIDS---Fermented,	{ 1 dram to 1-2 a ounce.
Native,	
MINERAL ACIDS---	3 drops to 6.

The following, of this class, we consider as acting on the principle of neutral salts, from the union with the acids they meet with in the stomach and intestines :

TESTA-

TESTACEOUS ANIMALS—

Crabs,
Lobsters,
Cockles,
Mussels,
Oysters,
Scollop,
Periwinkle,

} These are taken by way of food.

SOAP—

KALI, or vegetable Alkali,

1 scruple to 1-2 ounce.
from 5 to 30 grains.

ABSORBENT EARTHS—

Crabs Claws,
Eyes,
Hartshorn prepared,
Chalk,

} from 10 to 30 grains.

LIME WATER—

2 to 4 ounces.

The diluent are—which also may be esteemed cooling—all the sweet acedcent fruits :

Dandelion

Potatoes

Endive

Boiled Onion

Lettuce

Water

Corn Sallad

Milk Whey.

Artichoke

MALVERN

CHELTENHAM } WATER,

ACIDULATED WATERS, }

§ 10. DIAPHORETICS, derived from the Greek *diaphoreo*, transfero, to carry through, include all such substances as increase perspiration, or sweat. This class used to be divided from sudorifics, or such medicines as promoted sensible perspiration, but unnecessarily ; for they seem only to differ in their degrees of action, promoting the same effect, more or less copiously or perceptibly. But as different purposes may be answered by the different degrees of action of those parts which produce these effects, it may be necessary to make some specification respecting the two.

Insensible perspiration is promoted by all such materials as produce an astringent effect upon, or contract the solids in a moderate degree, by occasioning an increase of elasticity or springiness of the vessels, and thus promote the circulation—hence Peruvian bark---all the astringent roots---austere wines---come under this division, as do exercise which is moderate, either walking, riding on horseback, or in a carriage---mild stimulants, or those of the stronger class weakened.

Z

Or,

Or, by such things as determine the matter of perspiration to the skin, such as moderately warm air, temperate exercise, an equal circulation of the fluids when the body is at rest, as well as in motion.

Or, occasion such a temperature of the skin, that it shall neither be too relaxed nor more rigid than requisite---hence frictions, lotions, and detersion are recommended; and it is from producing this effect that these things are found so beneficial to the stordious, inactive, and those who are advanced in life---unloading the system by those means, without weakening it in the smallest degree, but, on the contrary, increasing its power.

Now SWEATING is promoted by nearly the same means, for all such things as relax the vessels, and determine powerfully to the skin, will produce this effect, whether internally or externally applied.

Hence come under this class all those diuretics which act not upon the kidneys electively---warm water, or barley-water sweetened with honey, excite a copious sweat---a glass of cold water drank going to bed---also those things which take off spasm, whether they are demulcent, or moderate or correct acrimony, as opium---testaceous powders. All strong frictions, warm vapor, particularly of water, warm bathing, or whatever will render the skin relaxed or soft.

Nitre, and its preparations, and all those substances which dispose the vessels to act upon their contained fluids---thus vinegar sweetened with honey, and diluted with water, is the best sudorific in acute cases, and was a favourite remedy prescribed by HIPPOCRATES, in the following form, called HYDROMEL, from *odor*, water, and *mel*, honey:

Take of Vinegar, }
Honey, } each one ounce.

Mace, a small portion, to give it an agreeable flavour.

Water, twelve or fourteen ounces; let this be drank in bed after the manner of tea or coffee; and the patient there wait the result.

Care though should be taken, that honey does not disagree with the constitution; for, where there is any natural antipathy, it is apt to produce violent affections on the stomach and bowels; sugar should therefore, in these cases, supply its place, or treacle will have a better effect. Whatever is taken hot, as well as heating aromatics, opiates, as also violent motion, are highly sudorific.

Besides, such things as diminish the external pressure of the air, and those which increase the strength of the heart, with respect to its number and force of pulsations, come under the head

of sudorifics—such as Rhenish wine, fresh juice of citron, penetrating aromatics, volatile salts, &c.—those things which stimulate externally, as all acrid matters applied to the skin, as vinegar and ginger, which is the most subtle and penetrating, and much recommended by HELMONT—and lastly, whatever, restores impeded motion in the internal parts, as passions and affections of the mind reproduce retarded perspiration.

Though a number of the medicines mentioned above are stiled diaphoretics; still, strictly speaking, and considering them as such, independent of their connection with sudorifics we have no one of which we can speak with any certainty that has been tried by statical experiment, the only mode we have of discovering them, except ASA FOETIDA, as handed down to us by SANCTORIUS—yet I should suppose, that the power of all sudorifics weakened might be justly considered as diaphoretics; for we find all those things which can increase the circulation, determine the fluids externally to the skin, and take off the spasm from the minute vessels, are certainly entitled to the character of diaphoretics and sudorifics; and these three particular circumstances should be adverted to, when we want to promote a discharge of this sort for any good purpose; for though stimulants and sedatives, or medicines possessing both these powers, may in many cases be very proper, they may in some, conjunctively or separately considered, be detrimental—and indeed there may be complaints where sweating would be improper, though the promotion of gentle perspiration might be useful, as in the scurvy—but in the venereal disease, if the effect could be produced with ease, sweating is the best method of cure, and preferable to either evacuation by stool, or salivation.

From what has been advanced, we shall find that all general stimulants of the system, as motion and heat, are powerful sudorifics;—particular ones are either applied to the excretories, those pores from whence the sweat issues, or to the parts consenting with them, as the stomach and intestines; hence their action is either general, local, or sympathetic.

The catalogue of DIAPHORETICS contains

BURDOCK—Decoction,	{ 2 ounces in 3 pints boiled to 2,
	{ taken every 24 hours.
Powder,	1 dram.
SENECA, or RATTLESNAKE-ROOT—	
Powder,	Dose from 20 to 60 grains.
Decoction,	{ 2 ounces in two pints of water
	{ to 20—dose 1 to 2 ounces.
SNAKE ROOT—Tincture,	from 1 to 2 drams.
	Z 2 Powder,

Powder,	10 grains to 1-2 a dram.
GUALIACUM WOOD—	
Decoction,	{ 2 ounces to 3 pints boiled to 2 —dose 4 ounces.
Gum,	
Tincture,	See Cathartics. from 1 to 2 drams.
CONTRAYEVA—	
Powder,	from 10 to 30 grains.
Compound,	from 1-2 a dram to 2 drams.
SARSAPARILLA---	
Decoction,	{ 2 ounces to 4 in 3 pints of water boiled to 2, from 4 to 8 ounces the dose.
MEZEREON, or SPURGE OLIVE---	
The bark of the root,	{ 1-2 an ounce in 6 pints of wa- ter boiled to 4.---Dose, 1-2 a pint.
OPIUM---	
CAMPHOR,	{ See Sedatives. See Antispasmodics.
MUSK,	
SALT OF HARTSHORN,	
ASA FOETIDA,	
ANTIMONY---Lævigated,	
Calcined,	dose from 20 to 60 grains.
Tartarized,	10 to 30 grains.
Glass of cerated,	1-8 to 1-2 a grain.
Precipitated sulphur of,	2 to 20 grains.
ANTIMONIAL POWDER---	3 to 6 grains.
Wine,	2 to 6.
ANTIMONY---Tartarized wine of,	10 drops to 50.
IPECACUANHA---	20 drops to 40.
Wine,	1-4 to 3 grains.
WATER—	30 to 40 drops.
WINE—	
VEGETABLE and NATIVE ACIDS—	
ACETATED AMMONIA,	{ from 2 to 6 drams.
called Myndererus's	
Spirits,	
WATER OF AMMONIA,	dose 10 to 30 drops.
PREPARED AMMONIA,	5 to 10 grains.
Essential and Empyreumatic Oils--though they are seldom used in this view, but more as cordials and antispasmodics.	
From considering the operation of medicines of this class, we shall find that their utility is derived from diverting the deter- mination of the fluids, and preventing them from crowding the internal	

internal viscera—removing various causes, which obstruct or impede the natural state of the circulation on the surface of the body, and there restoring the natural discharge—and also from their evacuating power, lessening the quantity of the circulating fluids, when too great for the powers of the system—restoring lymphatic absorption—and discharging any morbid accumulation of serum.

But should the system be uncommonly relaxed, a great increase in the determination of fluids to the exterior surface of the machine—a great want of fluids—or the force of the blood on the basis of the brain much debilitated, the prohibition of their use is obvious.

The last of which we have to treat in this section are

§ 11. EMMENAGOGUES, from the Greek words *emmena* menses, and *ago*, ducō, to produce the menstrual evacuations of women; and all such medicines as have been supposed to produce this effect are comprehended under this title.

A great deal has been written, and much time wasted, by authors, in endeavouring to account for the precise manner in which nature performs this operation in the female machine: the only present satisfactory conclusion we have on this head is, that a fullness of the uterine system, from a peculiar determination of the blood to that organ, a permeability in the uterine and vaginal vessels, and an increased impulsive power, all periodically exerted, are necessary for the salutary promotion of that discharge—and when there arises a deficiency in all or any of these particulars, obstructions will take place, which require the aid of that class of medicines of which we are now to treat;—but as there are various purposes often to be answered, e'er we can promote the desired end, different medicines have been pointed out, and formed into divisions according to their action.

Hence have we EMMENAGOGUES,

Stimulating—as

Antimony, — Quicksilver.

Irritating—

Aloes, — Sabine, — Cantharides.

Tonic and Astringent—

Iron, — Cold-bathing, — Exercise.

Antispasmodic—

Asa foetida, — Castor, — Bathing the feet,

and a variety of others, possessing similar powers to those here specified.

But in the application of these medicines, one thing is to be particularly observed, that not any of them ought to be used

at

at all times, that is, previous to, and when the menstruating period is at hand, except the astringent class and quicksilver.

The irritating and antispasmodic are only to be called in aid, when there is an aggravation of the symptoms, and an effort of nature at her accustomed time. The reason of which is clear---because the former are considered only as preparatory, that by their operation the constitution may be put into such a state, as to be enabled to feel, and answer to the effects produced by the more powerful and forcible action of such medicines as add vigour to the circulatory vessels, push forward the blood quickly and rapidly, and take off any obstructions which may be caused by some spasmodic affections.

According, then, to the difference of the constitution we wish to relieve, so must we make our selection.

If it should be necessary to *give strength and firmness to the system,*

Astringents may be had recourse to---as iron, and its preparations---bark---and bitters.

If to increase the force in the moving powers in general,

Cold bathing and quicksilver.

If to produce partial action by the same mode,

Local Stimulants---

Partial warm baths---fomentations---stimulant vapor, or fumigation of tobacco to the uterus---aloetic medicines---fetid gums---cantharides---acrid purgatives---as they may communicate their stimulus to the part, either immediately, or communicate motion to the vascular system from the exertion of their action on the contiguous parts.

If to take off constriction,

Antispasmodics---

Asa foetida---castor---but particularly musk.

There is another class which we must have recourse to, particularly where there appears to be a scarcity of the sanguinary mass, in order, as far as in our power, to increase the general volume of fluids, that the peculiar determination may with more ease be brought about, and this is the class of NUTRIENTS, selecting such to which the digestive powers of the constitution appears adequate to assimilate.

If now we call to our recollection what has been delivered---the means by which these appropriate remedies are rendered serviceable, will be---from promoting freely the circulation of the blood in the neighbourhood of the uterus, when too much obstructed there---from increasing the accumulation in the uterine vessels themselves, which is necessary to the menstrual discharge---and removing morbid obstructions to the passage of blood
into

into the cavity of the uterus---also, from augmenting the strength of the system in general, particularly of the vessels of the uterus, when defective—and removing any spasmodic constriction taken place in them.

But strong objections may often arise to the use of some of this class—if the rectum should be in a particular irritable state—or there should be any local inflammatory affection, we must avoid those which are irritating.---If the blood circulates with great force, or there should be particular debility of any other parts, the *stimulant* must be avoided; nor must those denominated *tonic* be meddled withal, if there should be any morbid rigidity in the system.

Our catalogue of EMMENAGOGUES supplies the following articles :

PENNYROYAL,	}	See Antispasmodics.
RUE,		
SABINE,		
ASA FOETIDA,		
GALBANUM,		
AMMONIACUM,	}	See Expectorants.
MYRRH—		
Tincture,		1-2 a dram to 2 drams.
QUICKSILVER,		See Sialagogues.
IRON—Rust prepared,		from 5 to 30 grains.
Tincture of muriated	}	from 10 to 60 drops.
Iron,		
Wine of,		1 dram to 1-2 an ounce.
AMMONIACAL IRON—		dose from 3 to 15 grains.
TARTARIZED IRON—		10 to 30 grains.
VITRIOLATED IRON—		dose 3 grains to 20.

Cathartics—Diuretics—and Emetics—may, if we consider the nature of their actions, be fairly included, on particular occasions, in the list of Emmenagogues.

C H A P. III.

WE are arrived at the third part of our arrangement, and must proceed now to treat on MEDICINES WHICH ACT UPON THE FLUIDS THROUGH THE SYSTEM, in the same manner as we have before spoken on those which acted upon the solids; and these include ATTENUANTS—INSPISSANTS—and DEMULCENTS—And, first, of

§ 1. ATTENUANTS, from the Latin *attenuo*, to make thin, perfectly

perfectly expresses the nature of all the medicines of this class, and comprehends whatever can be understood by *diluting*, *inciding*, and *resolving* medicaments; three terms into which this class have been, by many, divided, because they all contribute to render the fluids more thin and fluxile.

But as this point may be accomplished in two ways, either by substances mixing with a fluid, and rendering it more thin, but not changing or altering the particles of which it was composed; or having the power of diminishing the cohesion of the blood, and thus rendering its texture less firm and tenacious; they may be certainly, and ought to be divided, according to their action, into *diluent* and *resolvent*.

Among the first we cannot be properly said to have any other than water, which is productive of a variety of good effects upon the habit—but not merely by its diluting property, it acts more particularly, immediately, and universally, by its coldness. Now, as a diluent, it not only thins the fluids in the way we have above specified, but it assists digestion, (106) quenches thirst—is an universal vehicle for solid food, corrects acrimony—promotes fluid secretions—and is by many esteemed, much more than any other medicine, an universal remedy.

Now, as it is clear that all diluents should be more fluid than the humours which are by their intervention to be rendered thinner; and have at the same time, when mixed, the property of making them retain their acquired fluidity---we shall find, there is not any thing except water that possesses this power.

Though wine---oil---saline substances---fermented spirits---and some earthy substances have been said to enjoy these virtues, still it is obvious, that they are defective, and have not them in that degree so as to become really diluent---for wine, as a diluter, depends upon its watery particles joined with its stimulating power---oil renders the mass of fluids rather more viscid---saline substances resolve by their stimulus---fermented spirits are more apt to coagulate---earths are of themselves solid and inert, and can never be taken in this view, but as they may mix with some acidities in the stomach and intestines, and thus change their form, and become active from their assuming that of neutral salts, and with them may they be classed: therefore it is to water we must resort, when we wish to call in aid alone a purely diluting power---to which, it has been said, if we add gentle heat, or saline particles, as sea salt, Polychrest salt, sal ammoniac, or borax, we shall improve its power, by the addition of their stimulating effects, but this is adding a resolvent property---Moderate motion is also said to improve its powers.

But

But as for resolvents, they act by increasing the force of the moving powers by the stimulus they possess in a limited degree; for should they act violently, they would, by dissipating the thinner part of the fluids, render them thicker, and become incrassants; but by gently stimulating, though they produce evacuation, they permit the vessels to act more freely upon their contained fluids, and hence become resolvent.

On considering the action of this class, we shall be empowered to discover, that their beneficial effects arise, from removing any morbid viscosity in the blood, and restoring a free circulation, when in the small vessels it is morbidly obstructed---from increasing the quantity of serous evacuations, when too greatly diminished---and rendering them, when too thick and viscid, more fluid.

But their use must be prohibited in constitutions labouring under too great thinness of the general mass of fluids---having a propensity to morbid serous accumulations---or a remarkable increase of similar secretions.

The catalogue of ATTENUANTS are,

WATER,

MILK WHEY,

ALL LIQUIDS abounding with water,

CUCUMBERS,

WHITE LILY ROOT,

MELONS,

CELERY,

BETE,

SPINAGE,

ARTICHOKE,

BOILED ONIONS,

MUSHROOM,

CORN SALAD,

ENGLISH MERCURY,

CABBAGE,

And some others. All the SWEET A-

DANDELION,

CID FRUITS.

ENDIVE,

ALKALI---

Fixed vegetable,

Fixed fossil,

Volatile,

{ in small doses, and continued for
some time.

NEUTRAL SALTS---

See Diuretics and Cathartics.

SOAP---

See Diuretics.

§ 2. INSPISSANTS---these are also called INCRASSANTS---from the Latin words *inspiss*o and *incrass*o, to thicken. These terms, like the former, give us a perfect idea of their import---from whence we understand all such substances as give a degree of viscosity, to the circulating fluids.

From experience we know that our fluids do sometimes run into a state of morbid thinness; but by what means, is very doubtful.

Some have supposed it to arise from too great a proportion of fluid aliment; whilst others have been led to believe, it originated from a retention of some of the serous secretions. But if we reflect, that children and many adults live upon food totally liquid almost, yet no such appearance is the result; and that nature always supplies the defect of one secretion by the increase of some other, and the retention must be partial, it cannot be universal; both these opinions seem by no means satisfactory.

I rather think that it is occasioned by a relaxation of the system, particularly of some, or the whole of the digestive organs; for strong, muscular, laborious rustics, whose digestive powers are good, have generally, nay, I believe always, the blood tending to the opposite extreme—whilst the more delicate and relaxed, whose digestive powers are weak, have the sanguinary mass too fluid: indeed people whose blood has possessed a proper texture, have, from illness, had it reduced to a state manifesting a too weak cohesion, and that apparently by the system being debilitated.

Whatever may be the cause, it is our business to remedy the effects; and these we attempt by reproducing a proper proportion of viscid fluids, and by increasing their attractive power one with another; and their consequences may, we think, be acquired by the following catalogue of INSPISSANTS:

Wine,	Farinaceous Grain,
Acids vegetable	Mucilaginous and Oily
—mineral,	Substances,
Alcohol,	Sago,
Radiih,	Salap,
Turnip,	Almonds, &c.
Carrot,	Gum Arabic,
Parsnip,	—Tragacanth,
Skirret,	Starch,
Potatoes,	Isinglass,
Leeks,	Arrow Root,
Comfrey Root,	Animal Food,
Cucumber,	Fish,
Poppy, and	Eggs,
Melon Seed,	All the Astringents,
Onions,	Bark.

It has been remarked by some authors, that acids---wine---alcohol---and in some measure, the astringents used internally, have been said not to produce their inspissating effect; and should therefore only be employed externally, in cases of profuse bleedings; and that the nutritious and demulcent class, of which

we

we shall next treat, must, for restoring the viscid fluids, be depended upon.

However, I cannot avoid thinking the whole, alcohol excepted, may be used with much advantage; and greatly assistant in rendering those, which act merely on the blood, more quickly efficacious, by invigorating the system, increasing the strength of its vascular power, and consequently the action of the vessels upon the contained fluids.

On this head authors have confined themselves to such substances as were either *farinaceous*, as barley, wheat, rye, and such ---or *mucilaginous*, as marsh-mallows, gum arabic, isinglass, &c. and conceived their utility to be derived from removing morbid tenuity in the blood---preventing the transmission of red blood through vessels not naturally fitted to receive it---diminishing the quantity of those secretions which were serous, and too copious, and rendering them more viscid where morbidly thin and fluid---and have prohibited their use in morbid viscosity of the blood---preternatural diminution of the secretions in general---and a high degree of debility of the digestive organs.

I am persuaded that in many cases, particularly in those where a weak digestion is prevalent, the use of some of the stimulant aromatics, mixed with the invigorating astringents, such as bitters, bark, iron, would greatly conduce to conquer many of those defects for which incrustants are prescribed, and I have repeatedly seen their good effects; indeed I very often unite them, and find, that, conjoined, they prove more efficacious than when administered separately.

§ 2. DEMULCENTS, from *demulceo*, to appease or mollify. These by some have been considered to act in a double capacity, by blunting or sheathing the acrid particles of our morbid humours, or promoting an entire change in such as were offensive from their acrimony, and forming a third substance, perfectly different in its nature with respect to its action. Hence have they been ranked as general and particular demulcents. In the latter class are enumerated all the acids and alkalines, as well as some metals, with regard to their influence on each other; as if one was creative of any disturbance in the habit, by exerting a morbid stimulus from its acrimony, the other on being given proved corrective, and cured the affection; hence was stiled demulcent; but these are more properly arranged under other heads, as the antalkaline and antacids, of which we shall soon treat in their separate places.

At present we shall consider them only as obtunders of, or blunting acrimony, by mixing with and preventing the acrid

part of the fluids from exerting themselves on the solids, so as to create pain, or other uneasy sensations.

And it will appear then, that of all this class, in this view of the subject, are either mucilaginous, oily, or a composition of both; and these manifest their action immediately in the stomach or intestines; or, after having passed through the circulation, in the secretory organs.

For it is imagined, that acrimony takes not place in the blood vessels, but in the secretions, as the serum is thought to be the vehicle of acrid substances. These demulcents, therefore, mixed with the blood are separated with the serous, or thinner parts of the fluids, in those places of the system where secretions happen; and thus, by enveloping the irritating particles, prevent them from stimulating.

Thus they defend the kidneys, the lungs, the vessels of the vagina and uterus, in nephritic or gravelly complaints; in defluxions on the lungs; and cases of the whites; and are highly useful in hæmorrhages, which are often maintained by acrimony; for increased secretion of mucus is always acrid, till its thinner parts are dissipated, by lying some time—hence their use in coughs, defluxions on the breast, the whites, and those discharges after child-birth, called lochial.

Whatever good we may perceive can be derived from medicines of this nature, may be acquired from some of the following selection of DEMULCENTS:

Larger Comfrey Root,	Hips,
Seeds of Cucumber,	Liquorice,
—— Poppy,	Gum Arabic,
—— Melon,	—— Tragacanth,
Sugar,	Starch,
Honey,	Isinglass,
Raisins,	The Nutrients,
Dates,	Emollients, and
Figs,	Sedatives,

though these last can scarce be said to act in the mode we have described of common demulcents; but rather take off the acrimony by diminishing the sensibility of parts; and produce a viscosity of the secreted fluids, it is obvious from the appearance of the matter, in those who have taken opiates, after their narcotic effects have ceased.

And this I take to be owing to the vessels being by their power thrown into a state of torpor, and thus suffering the secreted fluid to become more dense by its continuance, and consequently less acrimonious from the dissipation of its more serous parts.

They have been divided into LENIENT DEMULCENTS, such as Starch,

Starch, Gum Arabic, Olive Oil---and those which are DILUENT, as Water, and watery substances; but these last come not properly under this head, without being mixed with some of the former; as they are apt, without such mixture, to pass off too quickly by some of the emunctories.

The use to be acquired from the administration of these materials are, a diminution of the action of the ordinary stimuli upon parts affected with too great sensibility, and a supply of the natural coverings of the parts where too defective—diminishing morbid acrimony in the system in general—and rendering more mild those secretions which are præternaturally, or too violently acid.

But their administration would be pernicious, if there was any defect of a natural pungency in the secreted fluids—a great degree of viscosity in the coverings of the sensible parts—or an uncommon want of sensibility in the excretory organs.

C H A P. IV.

WE are now come to our fourth division, wherein we purpose to consider

MEDICINES WHICH MANIFEST THEIR SENSIBLE ACTION CHIEFLY, IF NOT SOLELY, IN THE FIRST PASSAGES RESPECTING THE FLUIDS.

The first of which present themselves to our view are,

§ 1. ANTALKALINES, from the Greek words *anti*, against, and *alkali*, alkalies, consequently all acids and acescent materials come under this description; as do all such medicines as conquer alkalies, and destroy their power of action as such. But in this place the acids and acescents are only to be considered as correctors of alkalescent substances; for we have before seen the diversified power they appear to maintain as *astringents*, *stimulants*, *sedatives*, *inspissants*, *catbartics*, *diuretics*, and they will also rank with *antiputrescents*; at least such of them as have been selected agreeable to the effects they have been thought to produce on the human machine: and here their chief action appears to me to be in the first passages only, where, coming in contact with alkalescent substances, there they neutralize them.

I am of opinion, that where there happens to be, from any disease, an alkalescent state of the fluids, they are not of much service by acting in them merely against, and correcting such alkalescency; for when our fluids are affected to any considerable degree with this, little is in our power; but in cases of this kind, should

should they be of any service, I am persuaded it is more from their action communicated to the solids, particularly the mineral acids, than from any other cause. Perhaps the utility derived from the native acids depends more upon the fixed air, with which they are replete; for we have not a more powerful corrector of putrescent acrimony than this species of air.

They have been divided into vegetable and saline antalkalines—but the better division is, into native, of which sorrel, barberry, and tamarinds, form examples—and into artificial, as the acid of vitriol, sea salt, nitre, and vegetable.

The catalogue of ANTALKALINES, with which we are supplied, are,

SWEET ACESCENT FRUITS.

Pears,	Tamarinds,
Apples,	Currants,
Oranges,	Grapes,
Lemons,	Cherries,
Strawberry,	Raisins,
Raspberry,	Dates,
Barberry,	Figs, &c.

MOST OF THE CULINARY PLANTS.

Cucumbers,	Cabbage,
Melons,	Nasturtium,
Bete,	Endive,
Spinage,	Dandelion,
Corn Salad,	Lettuce,
Salady,	Parfnip,
Asparagus,	Skirret,
Artichoke,	Potatoes,
Radish,	Leek,
Turnip,	Onion,
Carrot,	Garlic.

OLIVE,

WATER DOCK,

SORREL, &c.

WINE,

VINEGAR, with the ARTIFICIAL MINERAL ACIDS above specified,

SALT OF AMBER. See Diuretics.

And likewise the whole class of DEMULGENTS; but these act by mechanical, not chemical mixture—that is, from merely mixing with and sheathing the offending particles, not from altering them, by forming a new combination, so that each body loses totally its natural properties, and becomes a third, differing from both

both—and, perhaps, some others here specified, may act in the same mechanical mode.

It will, from this concise view, appear obvious from whence the whole of the virtues of this class of medicines may be collected—and where their use ought to be prohibited—their power of neutralizing alkalies.

For, ON THE ONE HAND, by this power they are capable of removing any sensation of alkalescency in the first passages—restoring the natural disposition to acidity in the stomach—and correcting in the alimentary canal præternatural putrescency.—ON THE OTHER, if there should be, from an acid cause, any natural disposition in the stomach to that painful sensation, called GARDIALGIA, an uncommonly slow and languid circulation, or any considerable diminution of animal heat, these defects they would increase; consequently, under such circumstances, ought to be prohibited.

§ 2. ANTACIDA, Antacids, from *anti*, against, and *acida*, acids. These comprehend all alkalescent substances, most of the absorbent earths, and some neutral salts—and are such substances as counteract acidity in the same manner as acids conquered alkalies—and are in this light here only to be considered, as we have before taken notice of them with respect to their different operations in the habit, selected agreeable to their various powers, acting as *stimulants*, *antispasmodics*, *attenuants*, *antiseptics*, *cathartics*, and *diuretics*—and in this place they seem chiefly to exert their efficacy only in the stomach, now and then, perhaps, in the intestines.

The catalogue of ANTACIDS with which we are presented, sufficient to answer any purpose they are capable of effecting, are TESTACEOUS ANIMALS. See Diuretics.

ANIMAL FOOD—

LIME WATER—

Dose 6 ounces to 16 in a day.

CHALK—

CRABS EYES and CLAWS—

BURNT HARTSHORN—

Decoction of,

EGG and OYSTER SHELL prepared—

} prepared, from 10 grains to 2
drams.

} from 10 grains to 2 drams.

ALKALI—Vegetable,

Fossile, called Soda, or Natron,

Volatile,

BORAX—

TARTARIZED KALI, or

SOLUBLE TARTAR—

} from 5 to 30 or 40 grains.

} from 3 to 20 grains.

} from 4 to 10 or 12 grains.

} 12 to 20 or 30 grains.

SOAP—

SOAP—

See Diuretics.

STIMULANTS—

ANTISPASMODICS—

SEDATIVES—and

DEMULGENTS—

Though most of these act by coming in contact with the prevailing acid immediately, without considering the solids—yet those under the general titles, except the demulcents, which become serviceable by their sheathing property, produce their effects by the influence they have on the moving powers, which we have in their proper places before specified.

As the action of these, like the former, is so very limited, only to be considered in this place as counteracting acidity in the first passages, we shall have occasion to say little more than will be sufficient to shew where they will be beneficial, or in what cases their exhibition would be improper.

When there is a morbid prevalence and sensation of sourness in the alimentary canal; when, from the same cause in the stomach, the natural appetite is vitiated, and the action of that organ and intestines is disordered, they are of service in removing the former, and restoring the two latter to their healthful standard.

But when there is a prevalence of alcalescency in the stomach and bowels, or a tendency to putridity in the general mass of blood, they must be highly detrimental. And, perhaps, in this last case, the mischief which would arise from their use may be more owing to the destruction of the acid in the first passages, than from joining in their alcalescent state with the fluids, as acids have been considered antiputrescent.

§ 3. ANTISEPTICS, from *anti*, against, *septica*, putrefaction, substances occasioning putrefaction. These include all such materials as obviate the too great putrescency of our fluids.

Now as the putrescency of our humours may be brought on by excess of heat and motion, as well as receiving any putrid ferment into the vascular system—as it, when once fixed, and begun to exercise its deleterious action, induces languor and great debility in the moving powers, we may see the reason of our antiseptic class of medicines, exhibiting, according to the conception we have of their action, such apparently contradictory views—for in the same arrangement we shall find, that we have the *volatile salt*, and those of the *neutral kind*—the former considered as highly heating, and a strong stimulant of the moving powers—the other as cooling the system, and mitigating vascular motion.

From

From thence I presume, that they are only applicable in different stages of putrescent action; or in different constitutions affected with putrefaction;—and not unlikely the same may hold good with acids and alkalies, for they are both enumerated under antispasmodics. Of these different substances it therefore behoves us to be careful in the application.

In the first stages, *where a putrid tendency may be accompanied with high degrees of circulatory motion and heat*, or in constitutions where these are prevalent, neutral salines and acescents may be the most proper; but *in languid habits*, or those made such by the continuance of the enervating power of putrid particles, volatiles and cordials challenge the preference.

Nitre has been said to be strongly antiseptic, when applied to inanimate animal matter, but not so in the living subject, as it lessens the powers of the vital actions—but this is only applicable in the advanced stage of putrescency; and it is to that state of the disease alone they must mean to advert, who advance, that cordials, and whatever invigorates the solids, by increasing the vital heat, are properly antiputrescent, and by what alone relief can be obtained in putrid complaints.

However, our chief intent in these cases is to keep up a due action of the moving powers, and a proper tone of the solids, that is, an active firmness—which effects, we conclude, may be produced by the subsequent selection of ANTISEPTICS:

Those FRUITS which have sweetness coupled with acidity,

Cherries,	Oranges,
Apples,	And such like.
	Acerb Fruits,
Quinces,	Sloes, &c.
Medlars,	

Wine,
Vinegar,

Nitrous
Muriatic
Vitriolic

} Acid,

} See Diuretics,

Salt of Amber,

Some Neutral,
Mentalline, and
Earthy,

} Salts.

Essential Oils,

Empyrematic Oils.

Acetated Litharge—from 1 to 3 drops.

Alum—

Nitre—

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Alcohol,

Alcohol,	Quassia,
All Vegetable	Oil of Turpentine,
Nutrients.	Ale—Porter—Cyder
Astringents,	—Perry,
Stimulants,	Camphor,
Sedatives,	Asa Fœtida,
Antispasmodics,	Musk,
Wormwood,	Myrrh,
Chamomile,	

but, in cases of languor, certainly the most eligible are,
Wine—

Bark---

Extract,	} dose from 12 to 1-2 dram.
Resin,	
Decoction,	{ 1 ounce to 2 pounds reduced to 1 pound ---dose 2 ounces.

Bark---

Powder,	20 grains to 2 drams.
Tincture, simple,	1 to 2 or 3 drams.
compound,	{ 1 to 2 or 3 drams.
or Auzham's	

They have been properly divided into such as are *tonic, increasing the activity and strength of the system*, of which Peruvian Bark---Wormwood---and Chamomile are examples.

Such as are *cooling*---Acid Salines---Neutral Salts.

Stimulant, as Wine—Alcohol---Oil of Turpentine.

Antispasmodic, as Camphor---Asa fœtida---Musk.

The utility of these are derived from resisting and correcting putrefaction---by preventing the assimilating quality of any putrid ferment received into the machine---correcting the putrid disposition of the humours---obviating the progression of putrefecency taking place in the solids---and restoring to a sound state solids morbidly putrid.

But in cases where a peculiar sensibility of the stomach is prevalent, those called TONIC are to be avoided—the REFRIGERANT, where a debility of the vital powers are manifest—the STIMULANT, when we perceive too great a degree of irritability, circulation too highly accelerated, or strong disposition to profuse bleeding—and the SEDATIVE ANTISPASMODICS, when there is a too languid circulation, a lethargic disposition, or a considerable degree of torpor in the system.

C H A P. V.

IN our fifth and last division we include MEDICINES WHICH PRODUCE THEIR CONSEQUENCES BY EXTERNAL APPLICATION;—OR ON SUBSTANCES FORMED WITHIN THE MACHINE, THOUGH LODGED WITHOUT THE VERGE OF CIRCULATION. The first of which we shall consider are,

§ 1. EPISPASTICS, or VESICATORIES, from *epispas*, to draw, and *vesicatorium*, as raising a blister. They are therefore stimulants, in the first sense, locally such; and, if continued, become evacuates.

But their action is not confined to those places where they immediately act; they communicate that action to the system in general, and often in particular to the urinary passages; but this effect is chiefly produced by cantharides, or Spanish flies.

They have been formed into three divisions, viz.

1. Such as only occasion heat in the part—of which class may be considered the slightest stimulants.

2. Such which create heat, with some degree of inflammation, as Horse-radish—Mustard—Volatile alkali.

3 Those which raise blisters, as cantharides, Euphorbium;—to which may be added a fourth.

4. Those which produce a discharge of pus, as Setons and Issues.

They are often applied with different intents, either as they act on the nervous power, alter the balance of circulation, or produce evacuation; hence are their particular uses discoverable;—in removing torpidity, or languor in the system---conquering the effects of more than usual sensibility---decreasing violent pain---weakening the circulatory force of the blood against any part morbidly affected---and also of action in vessels of the neighbourhood of those to which they are applied. They also decrease the volume of the circulating fluids when too great in the habit, and evacuate morbid accumulation of serum.

But should the system be in general highly irritable, the blood præternaturally thick, or the fluids in general too defective in quantity, these circumstances demand the prohibition of their use.

§ 2. PHLEBOTOMIA, bleeding, from *phleps*, vena, a vein or artery, and *temno*, *feco*, to cut.

Under this term are arranged all those modes by which blood is evacuated from the machine by the medical art; and these operations are considered as either producing general or partial

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effects,

effects, by relieving the system in general, or only in some of its parts.

The division of this class has commonly been general, and topical, or local; and instanced, in opening a vein, or an artery, as belong to the first; as to the second, scarifications, or cupping-glasses, which are called *cruentæ*, from the drawing blood—and the application of leeches; but the terms, it has been thought, would be more judiciously confined to the quantity taken, as veins or arteries must in all cases of blood-letting be opened. *In general bleeding* we commonly take away such a quantity as will in some degree decrease the power of the system—in *local*, such a proportion only as may contribute to relieve a part of the system near which the operation is performed—or, we ought to make such distinctions, for the sake of propriety, by which we should understand, that in general bleeding, the larger branches of the veins or arteries are opened—in local, only the capillary, or very small branches.

From whence the use accruing from this operation is derived may be easily conceived—as it proceeds either from lessening the quantity of blood, altering the state of its motion, or changing its course.

Hence it relieves in all cases where the mass of blood abounds too much in quantity; or, when there is a too great tension or distension of vessels in the system, when the force of circulation is highly increased, or the heat immoderate, or when in particular blood-vessels there is a morbid increase of action, or the force of the blood is too great against parts morbidly affected.

But where there is too great a scarcity of blood, the circulation remarkably weak or languid, or too great a debility in the voluntary motions---these are powerful objections to its use.

Though from this operation it is apparent that the highest advantages may accrue; and indeed, in many cases which are inflammatory, or arise from sanguinary congestion, nothing can be done efficaciously without it; still I think it is made infinitely too free use of, especially in those places and climates where people are liable to fall into putrid, and some malignant complaints.

Where the patient is strong and athletic the pulse full and tense, and there appear evident signs of too great plenitude, it is *universally* right to bleed, otherwise there is some caution required; for it very often hurries the habit into such a state of extreme debility, in some fevers, that nothing can compensate the mischief it occasions.

In all doubtful cases, therefore, where it may be thought necessary for blood to be taken away, I would advise the operator
to

to lay his finger on the pulse of the opposite wrist to that wherein the operation is performed ; if, during the flowing of the blood, the pulse rises, it is an indication to persist ; if it should flag, we should immediately desist.

§ 3. ANTHELMINTICS, worm medicines, from *anti*, against, and *elmins*, vermis, a worm : or VERMIFUGES.—

Thus are called such substances as destroy or expel worms, whether situated in the gullet, in the passages to the stomach, the stomach itself, or the intestines ; but, though it has been said, worms are formed in various parts of the machine, and have been found in different places, as the liver, kidneys, lungs, membrane surrounding loosely the heart, brain, cavities of the teeth, &c. we confine ourselves to medicines which perform their office on those which lodge in the first passages.

BOERHAAVE used to divide this class into two, viz. those which destroy and those which expel worms ;—but there may be cases where the exhibition of these may be improper, because of the particular state of the stomach and intestines being unable to bear their action—hence modern authors have more judiciously divided them into four heads :

FIRST. Those which are supposed to destroy, by poisoning the worms, termed *venenosa*, poisonous as

QUICKSILVER—

See Sialagogues.

TIN—Powder,

dose 6 to 20 grains or more.

SULPHUR—Flowers of,

See Cathartics.

SECOND. Those which expel worms, or *cathartics*,

SCAMMONY—

JALAP—

ALOES—

GAMBOGE—

} See Cathartics.

THIRD. Those which have lubricating properties, called *lubricantia*, lubricating, as

OIL OF OLIVES—

LINSEED OIL—

FOURTH. Medicines supposed to have a tonic power, or giving activity and strength to the bowels, named *tonica*, as

SABINE—

See Emmenagogues.

WORM SEED—Powder,

dose 1-2 a dram to a dram.

TANZEY—Infusion,

$\frac{1}{2}$ a pint to 1 pint in 24 hours.

Powder,

10 to 30 grains or more.

Besides these there are a number of other articles exhibited for this purpose—

INDIAN PINK ROOT—

Powder,

8 to 40 grains.

FERN ROOT—Powder,

1 dram to 3.

COWHAGE—

COWHAGE—

SALT—

CAMPHOR—

BITTERS—OIL IN GLYSTERS—

HARROWGATE WATERS,

{ the hairy part scraped off the
 pods, and mixed with syrup,
 to the consistence of an elec-
 tuary, dose 1 to 2 tea-spoonf.
 in strong solution.
 See Antispasmodics.

But I believe Calomel in general one of our most superior vermifuges.

The utility of these medicines naturally result from their action on the worms themselves—also on the system—by which means they either destroy, expel, or prevent their generation in the machine.

But some exceptions may very properly arise to the use of each under particular circumstances—if the intestines should be in an inflamed state, or be abraded, the *venenosa*, or poisonous, should be avoided—the *lubricantia*, lubricating, if there should be accumulation of fordes in the first passages—if a peculiar sensibility of the stomach, the *tonica*—and the *cathartic*, if any topical inflammatory affection should occupy the intestines, or should the constitution labour under any deficiency of fluids.

§ 4. LITHONTRIPTICS, from *lithos*, lapis, a stone, and *thrupto*, frango, to break. By this term we should mean all such materials as dissolve the stone;—but our catalogue, under that idea, would not, I fear, comprehend any, notwithstanding the variety of pompous pretensions some have published on the certain existence of medicines endowed with this solvent property. But it is the general opinion of the candid and rational practitioners; that those who write now on the power of medicine, though they retain the term, only mean such substances as possess a power of removing the disposition in the body to the formation of calculi, or stony concretions.

Indeed, we have had much said on the dissolving power of alkalies and quick-lime—soap ley taken in broth freed from its fat—Mrs. Stevens's solvent, and lime water—for a long series of time; still few have found the wished-for success; but how far they may act as preventive remedies, as well as some others, cannot be possibly determined. From the use of bitters and the *uva ursi*, or leaves of bear's wortle berry, in this view, I have known some benefit to arise in patients subject to gravelly complaints, from a collection of stony or gouty matter. Much is said at present of, and indeed the many experiments lately made seem to prove the utility of a solution of the VEGETABLE AL-
 LI, called *kali*, impregnated with fixed air, half a dram of the salt

salt given at each dose, dissolved in any proper liquid, twice a day, and this increased to two drams or more, and continued for some time.

They have, however, been divided into such as are ANTA-CID, as

LIME WATER—	6 ounces to 16 in the day.
SOAP—	20 grains to 1-2 an ounce.
CAUSTIC ALKALI—	} in veal broth—10 to 30 drops.
SOAP LEY—	
KALI with fixed air,	{ in infusion, 2 ounces to 2 quart of water—dose, 6 to 8 ounces.

Such as have an ASTRINGENT POWER, as

BITTERS—

UVA URSI, or Bear's Wortle } See Astringents.
Berry,

But it has been alledged, that all alkalies in general possess this stone-dissolving power, therefore in their caustic state they are by some rejected; because they are apt to disagree with the stomach, and from thence are they obliged to be employed in too small doses.

As solvents, I am of opinion, little can be said of the use of the class here enumerated; but as preventives, having a power to obviate the generation of stony concretions in the machine, they may be considered to be beneficial in two ways---in altering the state of the solids, by preventing a particular state of laxity of the stomach, and in the kidney---and in producing such an effect upon the circulating fluids, that they become less liable to furnish stony materials to be secreted by the kidneys,

But certain objections will arise to the use of the *antacids*, if in the stomach there should be a disposition prevalent to generate *alcalescency*---to the *astringents*, if there should be a rigidity, or contraction in the coats of that organ.

On *vermifuges* and *lithontriptics* we have been more concise than on other parts of our subject; because they each are appropriated here only to the alleviation of single complaints specified under their respective heads; of which, when we come to treat hereafter, we shall be obliged to speak more fully; and enlarge more on the particular nature of the remedies in each case administered: at present it has therefore been thought sufficient to furnish a general idea, in order to prepare our readers properly for more easily understanding what we have to deliver on these heads.

And now we must observe; that, notwithstanding, in treating on medicines, we have enumerated a great variety, which many
pre.

professors have thought essentially necessary to be produced; there have not been wanting some in the medical world, who seem to despise all this labour, as well as the authority of *Hippocrates*, *Boerhaave*, and all the men of eminence, who have been considered as shining ornaments of their profession; and publicly avow, that a very few medicines, properly applied, will serve every purpose of the medical art—and these are,

CANTHARIDES, used
chiefly as blisters,

CALOMEL,

TARTARIZED ANTI-
MONY,

ALOES,

SENNA,

JALAP,

SALTS,

OPIUM,

With the use of nutritious diet
, and domestic cordials.

However, we cannot avoid confessing, that we think this catalogue infinitely too concise; particularly as there are some medicines omitted which have surprising effects, for which we cannot so readily account; but whose efficacy has been confirmed to us by practice; and others of which, from daily experience, we are forbid to doubt the utility. I would, therefore, in order to render the catalogue more complete, subjoin the following articles:

OIL OF CASTOR,
ANIMAL OIL,
OIL OF AMBER,
VOLATILE ALKALI,
FLOWERS OF ZINC,
WHITE VITRIOL,
PERUVIAN BARK,

ASA FOETIDA,
MUSK,
CAMPHOR,
IPECACUANHA,
IRON,
RHUBARB,
SABINE.

Before I quit this subject, I would beg leave farther to observe, that though I have placed the doses of medicines as usually administered to adults; in all active medicines, I should recommend them to be given in small doses at first, and gradually increased, till we have arrived at the fullest that the constitution can bear with ease, as the only mode of trying what good effect may be produced by their powers: and here we shall often find a surprising difference in the quantity necessary to promote the end desired—for I have known two grains of a very active medicine produce as powerful an effect on the constitution, as eight or ten would on another; and this knowledge can only be obtained by particular experience. Indeed, I have known complaints cured by the very same medicine under the management of one practitioner, that had failed in the hands of another; which only

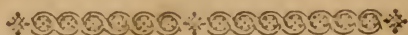
ly arose from the different modes of management respecting the quantity administered.

With regard to the forms in which medicines ought to be exhibited, the intent to be answered should be particularly considered; whether the *expeditious* or *permanent action* is most eligible—if the former, they should be given in liquid—if the latter, in solid forms—because in their diffused state they act most quickly.

For a very great variety become effectual by communicating their power from the stomach to the rest of the machine sympathetically; consequently the larger surface of the stomach they touch at the same time, and stronger their action, the quicker and more powerful will be their effect—In acute cases, therefore, these purposes will be best answered in a state of solution: but, on the contrary, in chronic cases, solid forms are preferable; because they occasion medicines to act slowly, and, of course, make that action more durable, by remaining longer on the stomach;—besides, all medicines which are not easily suspended in any liquid, should be administered in form of *bolus—pill—electuary*—or *powder* mixed with syrup or some other viscid substance;—those which are volatile, very light, or readily miscible with any menstruum, should be given in *mixture* or *draught*. Where a greater proportion of any vegetable body is required than the stomach can bear in powder, and where the active part can be extracted by water, *decoction* or *infusion* is the most proper;—and all oleaginous substances require the addition of some intermediate viscid body, to make them properly incorporate with watery fluids, or syrups, and are most elegantly administered in form of *emulsion* or *linctus*.

Though some small difficulty may arise to readers slightly conversant in medical researches, on the perusal of this part of the work which treats on medicine.—Still, by bestowing a little pains on each division—from the advantage they will receive, they will not find their labour ill bestowed—for they will be taught the simplest, most easy, and certain mode of prescribing, as well as the most powerful—they will also understand, from the knowledge of the different powers of medicine, not only where they are likely to be serviceable, but where they will be of dangerous consequences—a species of information which every man ought to possess, who dares venture to prescribe either for himself or others:—for the first law of physic is, NOT TO DO HARM IN ALL OUR EFFORTS TO DO GOOD; of which no man can be certain without he knows precisely the active properties of such medicines as he administers; and whether they are properly

adapted to the constitution, under the circumstances of the morbid attack which he labours to remedy.



SECTION VIII.

ON DISEASE IN GENERAL.

HAVING finished those parts of our work which were considered as preparatory to the more complicated, we must now enter on an inquiry into the nature of diseases, with the best modes of discovering and curing them.—But, previous to this, it will be of use to say something general on the subject, in order to shew what is meant by disease—how discovered and distinguished—the different causes—with the indications of cure.

By DISEASE is meant a general or local affection, by which the system is disturbed, or the action of a part impeded, perverted, or destroyed—or, an appearance deviating from health, from some general, partial, or local affection, by which the system in general, or in a part, is oppressed or disfigured---and this is *discovered* and *distinguished* by an enumeration of certain symptoms or appearances with which it is always associated.---But diseases differ; hence it is necessary to distinguish them from each other, with which they may seem to have a near affinity---this is done by the causes and peculiarities that are connected to them; and from whence the deviation arises.

The causes of the disease are threefold:

1. **PREDISPOSING**—When the constitution collectively, or in part, is in such a situation as is most favourable to produce disease; or to receive the impression made by its cause immediately considered;—and these are either

Inherent or hereditary,

Adventitious or accidental.

put into action, or brought about by the

2. **REMOTE, or INDUCING**, which depend upon the state of their climate—situation mode of life—indiscretion—or the elective power of morbid particles, called *miasmata*—*virus*—*effluvia*—occasioning the

3. **PROXIMATE or IMMEDIATE**, which are such as from their
action

action constitute the immediate source of disease—and from whence arise the

INDICATIONS OF CURE, which consists in the removal of the operating causes; or the preventing the constitution feeling too powerfully certain effects, till the matters occasioning them can be thrown out of the habit, either by the efforts of nature, or of art.

But the most eligible mode is the PREVENTIVE, acquired by the consideration of the remote or inducing causes, where practicable---and hence preventing predisposition from being rendered active, by intercepting these causes, or guarding the habit against their influence.

This account, concise as it is, comprehends the whole practical part of medicine; from whence though shoot forth a variety of branches, which we shall dispose under the following heads, agreeable to such appearances as most strongly manifest themselves to our perception, whether FEBRILE---INFLAMMATORY---PAINFUL---NERVOUS---or MENTAL---or where evacuations are contrary to, or more copious than what is natural, stiled FLUXES---where difficulty of breathing is the crying symptom, called ASTHMATIC---or where the complaint depends upon the humours of the machine, or make their appearance upon the skin.



C H A P. I.

FEBRILE AFFECTIONS IN GENERAL.

ALL those are so considered where there is an alteration respecting the pulse and heat; for the most part, an increased quickness of the former, and the latter augmented in some degree; ---many of the functions of the machine injured---particularly the strength of the limbs diminished; attended with chillness, languor, lassitude, and other marks of weakness, without any local primary disease.

Under this head are comprehended all the fevers, of whatever nature, by which the human frame is afflicted; but, as they put on different appearances, they are divided under distinct heads, according to those appearances, as

1. CONTINUED, or CONTINENT,
2. REMITTENT,
3. INTERMITTENT,

C c 2

HECTIC,

4. HECTIC, and

5. ERUPTIVE.

In which order we shall pursue them ;—but we should first remark, that all those are called

CONTINUED FEVERS,

where they continue from their commencement to their termination without any intermission, remarkable remissions, or exacerbations, that is, increase of violence in the symptoms. To this class belong

- | | |
|-------------------------|----------|
| 1. The simple continued | } Fever. |
| 2. Inflammatory | |
| 3. Nervous | |
| 4. Putrid | |
| 5. Anomalous, or mixed | |

These fevers in general begin with lassitude--coldness--shivering, but without tremor or grinding of the teeth, and heaviness of the head--then the heat increases every day till the height, with prostration of strength, and a constant desire of lying down--head ach--and thirst--no exacerbation or increase of febrile affection, except from some perceptible cause. At the decline of the disease, there appears a moisture, sweat, or some other evacuation.

With respect to sensation, the symptoms discover themselves by a sense of weariness all over the body--a heaviness, attended with giddiness of the head--head-ach--bad taste in the mouth--often an imperfect, or depraved smell--a difficulty and tottering in motion--unwillingness to speak--a desire to keep in an horizontal position--a total want of, or scarce any appetite--great thirst--loathing of animal food, or any solids--a desire for watery acidulated cold liquids--no lascivious inclination.

In the cold state, breathing is small, quick, oppressed ;--*in the hot*, deeper and frequent ;--*in the cold state*, the pulse is small, intermitting, interrupted, and frequent ;--*in the hot*, full and frequent ;--*in the declension*, full and undulating.

The saliva is small in quantity, clammy ;--the mucus of the tongue, gums, and lips is greyish, rather yellow, and sometimes black--the urine in the course of the disease becomes hotter and turbid--there is a moisture in the skin and a sweat *in the declension of the fever*--the stools are liquid, yellow, often foetid--the mucus of the nose trickling ; and sometimes from thence hæmorrhages issue.

Fevers of this kind are often ushered in with a coldness of the extremities and paleness of the face---very often without any shaking of the limbs ;---after that there is a constant uniform heat,

heat, for the most part, except that it is greater *towards the height*; there is also *in the declension* a softness of the skin.

This is the history of the continued order of fevers in general, with such things as appear in the vital and animal functions with respect to sensation, voluntary motion, appetite, respiration, and the pulse; and also in the excretions and qualities of the solid parts.

Now as all the fevers of this kind have a greater or smaller number of these symptoms attendant, under each head we must enumerate such as will best inform us to which it particularly belongs, that we may be best enabled to make proper distinctions; and as the simple continued fever is the least complicated, we shall begin with that.

§ 1. SIMPLE CONTINUED, OR VASCULO-PLETHORIC, FEVER.

Such I would name it, because an increased action of the vascular system, and fullness of blood, are the immediate causes.

This fever is sometimes of very slight duration, terminating in one, at most, in three or four days, and seldom requiring any medical assistance.

DESCRIPTION. It makes its attack very often suddenly.

There is a slight coldness—the whole body grows red, particularly the face, attended with some turgescence, and a vapourous warmth. The head-ach comes on suddenly, the temples throb, the breathing is frequent, the pulse free, uninterrupted, quick, and full. *In the decline* of the disease, there appears a breathing sweat, with no remarkable change in the urine.

CAUSES. Whatever will supernaturally increase the action of the vessels, and induce too great fullness of blood in the habit, as errors in diet, too violent exercise, cold, suppression of some natural discharge, retention of some acrid matters offensive in the first passages, from some external injury, happening in an healthful constitution.

CURE. Medical aid is seldom in these cases necessary—nature most commonly is the physician. Drinking copiously of watery liquids warm, such as tea, weak broths, lemonade, small negus; abstaining from all solid food; and lying in bed to encourage perspiration, will be all that is requisite.

Or, if medicine must be employed, saline mixtures, or nitrous powders, may be had recourse to. (No. 1, 2.)

But should the fever put on more violent appearances—should the pulse not only be full, but rather hard, with any considerable degree of oppression and heat, and the skin dry; bleeding, according to the patient's strength, to the quantity of eight, ten,
or

or twelve ounces, may be advised---and, in case of costiveness, a cooling saline purgative (No. 3) may be administered, to produce three or four evacuations; and in order to appease any hurry which perhaps it may occasion, a quieting draught in the evening. (No. 4, 5.)

Suppose these should not succeed to our wish, and the symptoms before recited increase, the pulse excepted with respect to its fullness and hardness, these being in some degree abated; and the patient has passed a restless night; we must then fly to antimonials, as the most effectual in checking the violence of the fever. The most eligible of which are, tartarized antimony, formerly called tartar emetic, or the antimonial powder of the last London Dispensatory, a medicine answering every purpose of Dr. James's Powder. (No. 6 to 9.)

The first dose of the mixture, (No. 8.) or the second, if it meets with any foulness of the stomach, generally excites vomiting, which should be encouraged by copious draughts of chamomile, or weak green tea, or thin gruel---and afterwards the mixture continued.

It produces also in general a gentle sweat. One or two evacuations by stool, quiets the pulse, takes off the oppression and nausea; this, by its continuance, and ordering balm tea, barley-water, or some such diluting liquor, to be drank plentifully, banish, in common cases, every complaint.

But, notwithstanding all these efforts, should things wear a more unpromising aspect---should the sickness and oppression continue; the thirst, heat, and dryness of the skin increase: head-ach become intolerable; the patient very restless; the pulse keep up, or increase in fullness and hardness particularly, more blood must be taken away---though, should there be indications of great debility, and the pulse flag and grow low, it must be avoided---the feet may be put in warm water---and, in continuing the antimonials, great care must be taken that they do not operate too violently upwards or downwards, for these would aggravate the symptoms, or bring on a train of others of more serious consequence.

Under these circumstances, instead of the saline mixture before prescribed, the neutral volatile saline (No. 10.) is more eligible, because this, I think, determines more freely to the skin---and, trifling as the alteration may appear, I have seen changes obviously for the better on its being administered.

Notwithstanding the above caution, if emetics have been omitted in the beginning, particularly if there has been any sickness or nausea, they may be given at any period of the disease, if the strength of the patient will admit. (No. 11, 12.)

SYDENHAM says, " If any one should inquire at what time of the fever I would have a vomit administered, I say positively, at the beginning ; but should we be called in so late, which is often the case, that we could not at the beginning give a vomit to the patient for their relief, yet certainly I thought it expedient that it might be done at any time of the fever, if the disease has not so reduced the strength, that its violence cannot be borne—I have," continues he, " ordered a vomit without hesitation on the twelfth day of a fever, when all the retchings had ceased ; nor was it unattended with advantage."

But, to return to our subject. If, by the use of antimonials, the body should not be kept properly open, glysters, (No. 25, 26.) should supply the defect, administered in the evening.

From this treatment, a continued fever of this kind seldom remains longer than the fifth day ; but should it pursue its course to any later period, it is difficult to determine at what time it will cease.

Here we must be extremely cautious in our prognostic, both with respect to its duration and danger ; for there are often in the constitution many latent mischiefs which do not shew themselves ; or some, which manifest themselves not immediately, may be brought upon the internal and vital parts by the febrile exertions, that when we have a right to expect every favourable conclusion, these suddenly prevent the operations of nature, and in an instant overturn all our flattering prospects.

However, if this fever goes not off on the fifth day, it seldom continues longer than the fourteenth—during that space, we are then to endeavour so to regulate the moving powers of the solids, that they may neither act too powerfully nor too weakly—hence are they to be supported in a state of moderation—and this we do by thin diet, subacid drinks, such as the stomach can bear and relish ; as thin gruels, roasted apples, oranges, boiled turnips, and such like ; continuing, under various forms, the use of the antimonial saline mixture.

Besides the attention we have to pay to the system in general, sometimes the head, stomach, and bowels require our notice, in order to alleviate the particular affections under which they labour—for the head now and then is greatly disordered—listers applied between the shoulders, bathing and fomenting the feet with warm water, bring in these cases relief, and dispose the patient to rest.

If sourness should affect the stomach and intestines, creating pain and flatulence, we should unite with our medicines some of the absorbent earths, as magnesia, chalk, hartshorn, crabs eyes
or

or claws prepared, according as the habit is disposed to costiveness, or otherwise—under the first circumstance, magnesia—under the last, prepared hartshorn claims the preference.

In the manner above recited should we go on as occasion may require, till nature throws off her oppressive load at some of her accustomed periods, which will be either on the seventh, ninth, eleventh, or fourteenth day commonly—or, if the fever is of longer duration, seventeenth or twentieth. After this period they are seldom observed with any accuracy.

But suppose towards the close the strength of the constitution appears to be in a debilitated state, the pulse begins to sink, and the machine requires some stimulus, in order to rouse it to, and preserve its action—here we must have recourse to such applications as will invigorate the system; our former drinks and medicines must be altered; we must now give wine and water, white wine whey, or pure wine---or, if medicines are preferred, cordial, camphorated and stimulant medicines (No. 13 to 18.)

But wine will best answer the purposes we require, as it is considered to be the most grateful cordial with which we are acquainted.

However, if any others are thought more eligible than what we have selected, the class of stimulants will supply a satisfactory variety.

Before we close it will be necessary to observe, that much caution is necessary in pronouncing the approach of a crisis, or termination, or its perfect completion—for it sometimes begins and recedes.

On this occasion we should take the symptoms collectively; and, if they all appear favourable, wait for their continuance; for they will begin on one critical day, and not be complete till the next. If, therefore, the pulse becomes soft and full, and subsides daily, something below a healthful standard—the urine deposits a sediment to the bottom of the glass, or, on shaking, it subsides—the skin becomes soft, and a general sweat succeeds—if the patient's senses return after having slept, we may venture to pronounce boldly.

After matters are brought to this pleasing conclusion a dose or two of physic may be exhibited. (No. 19, 20, 21.)

The patient should return gradually to his accustomed course of life, lest he should, by throwing food into the habit in too large quantities, oppress the digestive powers, which, with the rest of the body, must be in a state of too great debility to perform their functions vigorously. His, diet, therefore, should not only be small in quantity, but of the lightest sort; because, from viscid food, the machine would labour under the same inconveniences

conveniences as above specified—he should eat often, but sparingly, take fresh air, and use moderate exercise, such as his strength will admit, but never pursue it to fatigue himself. Under such prudent management, his spirits and vigour will return rapidly; and he will every day perceive himself making large strides towards his usual state of health.

§ 2. INFLAMMATORY, or VASCULO-SANGUINEOUS INFLAMMATORY FEVER.

Because not only the same circumstances occur as in the former fever, with regard to the increased action of the vascular system, and fullness of blood—but the vessels have acquired a supernatural firmness, and the blood too great tenacity, by which I understand an inflammatory disposition.

DESCRIPTION. The patients at first feel as if they were wearied and had been beaten; are apparently weak, and have cold and hot fits alternating with each other; they tremble, and feel pains all over them, particularly in the shoulders, back, knees, and head: to these succeed an intense and burning heat, unextinguishable thirst; their eyes appear inflamed, with a redness and fullness of the face; they are sick and vomit; are also restless and uneasy; the pulse is full and strong; the skin dry; the urine for the most part high coloured, but sometimes like water; the tongue rough, dry, brown or black, and furred; blood drawn is very tenacious, and, on standing, covered with a coriaceous substance like buff-leather; they breathe with difficulty; the body is costive; they sometimes cough; are very watchful and delirious; a stupor and drowsiness come on; at last tremblings, twitching of the tendons, hiccough, and an involuntary emission of feces and urine close the fatal scene. With regard to the heat, it is of a particular kind, which, though it affects the touch very sensibly at first, yet seems to grow less violent the longer we hold the hand upon the skin of the patient.

As to the pulse, its hardness, strength, and fullness, are in greater degrees than are to be met with in any other species of fever.

And the urine is not only high coloured, but sharp, and in small quantities.

CAUSES. Those which are called *the remote or inducing*, are said to be, perspiration obstructed; sudden cold; too much exposure to the strong heat of the sun; fatigue; anger; hard drinking; too long watching; cold water drank whilst the machine is hot; or, in fine, whatever can put the vessel into too strong and quick action, and for some time continue it.

The *proximate or immediate*, acrid and tenacious blood obstructing the very minute, serous, and sanguinary vessels in different places and increased strength and activity of the vascular system, which the remote causes are concluded to confirm, as well as the appearances of blood taken away—the symptoms—mode of cure—and the inspection of dead bodies on dissection—for in them the viscera are found in a state of inflammation and mortification.

Young people in the vigour of life, rustics, sanguineous habits, free luxurious livers, and all those possessed of strong stamina and tenacity of the circulating fluids, are most prone to fall into this fever.

CHARACTERISTIC SIGNS. This fever generally attacks those who are formed with strong vigorous stamina and dense blood:—it is concisely defined, a great increase of natural heat, a frequent, strong, hard pulse, high-coloured urine, sometimes watery, and the functions of the sensorium a little disturbed.

CURE. This is performed by weakening the strength and activity of the vascular system, lessening the violence of their action, and thinning the blood.

If we were to remove the irritating cause soon after it had exerted its action, there is no doubt but every good consequence would accrue; but that we cannot do in all cases, particularly when morbid particles have got so blended with the juices, that some time is required before they can be properly prepared for being thrown out of the body;—or, after the increased action had continued so long, that it had by its effects contaminated the fluids; we therefore endeavour to put the frame in such a situation, that no violent mischief shall be created by the progress of the disease; and thus give nature an opportunity of exerting her salutary efforts with effect, and enable her to throw out the offensive materials from the mass of fluids.

For which purpose, if called in in the early stage, we depend upon bleeding copiously, and repeat it agreeable to the patient's strength, until the pulse is reduced to its proper standard—nor must we be deceived by the apparent oppression of the pulse, for by bleeding it becomes stronger—indeed *apparent* weakness and loss of strength proceed sometimes from too great fullness; so that the volume of fluids seems too powerful for vascular action; and unless this oppression is taken off, which bleeding most readily accomplishes, we should run the risque of their total cessation. Indeed, so necessary is this operation at the onset of these fevers, that if it is omitted, the neglect can seldom be recovered during the whole course.

It is most proper before the fourth or fifth day, but, under
some

some circumstances, it may be performed at a later period—in difficult and oppressed breathing—violent pain of the head, with high delirium, succeeded by drowsiness, in full and strong habits—for these symptoms indicate an inflammation of the lungs, or a superabundant load of blood in the brain.

Notwithstanding it *may be right* in any stage of the disease, it is only to be advised with extreme caution; for if this operation is carried to excess, so as greatly to weaken the patient, nature may be disqualified for throwing off the morbid matter at the time when the crisis should come on; which matter is most naturally carried out of the body, either by discharges from the intestines, kidneys, or the pores of the skin.

With respect to the necessity of repeating the bleeding, we are to be directed by the urgency and continuance of the symptoms: therefore after the first bleeding in six or eight hours, if the pulse should be nearly, or equally as hard and quick as before, and the other febrile symptoms similar, it may be repeated, though in smaller quantity, and even a third or fourth time, or more, under similar circumstances, may be necessary.

We are next to advert to the state of the stomach and bowels:—if there should be any oppression, nausea, sickness, flatulence, or weight at the pit of the stomach, or fullness there—should the body be costive, we should attempt immediately to clear them of their contents by emetics, (No. 11.) and gentle purgatives. (No. 3. 22 to 24.)

But should there be any inflammation of the stomach or intestines, vomits must be by all means avoided, as they might be succeeded by the most fatal consequences.

But should not any of the above symptoms occur, we must then endeavour only to take off the spasmodic affections of the skin, and promote perspiration, by creating gentle vomiting or nausea, by administering slight doses of antimonials alone, or mixed with saline mixture. (No. 6, 7, 8, 9.) Warm watery liquids should be drank copiously, the legs and thighs fomented with flannels wrung out of warm water, or the same liquid thrown in by way of glyster; for these are highly beneficial in thinning the blood, and relaxing the too tense fibres. And here we must observe, that bleeding, where necessary, should always be performed before we exhibit a vomit, in order to take off the general fullness of the habit, and prevent any congestion or obstructions taking place by its operation in the brain.

In case of costiveness, we should add small doses of tartarized or vitriolated kali, tartarized natron to the antimonials, (No. 6, 7, 8, 9,) cassia draught, crystals of tartar whey, or infusion of tamarinds may be administered. (No. 22, 23, 24.)

We must next endeavour to allay the heat by vegetable acids mixed with small portions of nitre ; and depend on such things as are cooling, diluent, and aperient ; and correctors of any acrimony which may keep up the irritation—hence all animal substances are to be rejected, because they are apt to become too stimulant and heating—and for the support and assistance of nature, we must depend upon *barley water—lemonade—apple-water—infusion of wood sorrel—currant jelly mixed with water—very weak white wine whey mixed with Seltzer water*—in any of which may be dissolved small portions of nitre, so that four or five grains may be taken at a time ; or the æthereal spirit of nitre, ten or fifteen drops for a dose—or, the *Hydromel of Hippocrates*, (see page 178.) omitting the mace ; for these are diluent, assist in quenching thirst, preventing the blood from becoming too acrimonious, help to dissolve its tenacity, consequently weaken the force of the vascular system, abate the power of the circulation, take off spasmodic constriction, and promote perspiration ;—and these liquids may be varied according to the pleasure of the patient.

Abstinence, as long as the strength will permit, should be advised ; but if that becomes defective, it should be supported only by the most light liquid food. If solids be required, which is seldom the case, not any thing should be allowed except thin panada—water or barley-gruel—roasted apple, or boiled turnip. The sweet acescent fruits, *when fully ripe*, may be taken freely ; for, as they abound with watery particles, are also diluting ; and as those of the vegetable class afford less nutrition, consequently are less stimulant than such other things as approach nearer to animal nature.

So long as the symptoms continue strong, we must chiefly adhere to the saline medicines—antimonial and nitrous powders, (No. 1, 2, 6, 7, 8, 9.) giving the nitre as freely as the stomach will bear it, and varying the form as may be judged convenient ; for these medicines are thought to correct acrimony, take off vascular constriction, and promote perspiration.

The room in which the patient lies should be spacious, and well ventilated with cool fresh air, impregnated with vinegar, the effluvia of fresh flowers, and a free circulation constantly permitted ; taking care so to dispose the patient, that strong currents may be avoided.

The bed-cloaths should only, as in health, be moderate, the curtains not close drawn ; and, in fine, every thing heating, and which can increase the force and quickness of the pulse, must be prohibited.

The patient should now and then be got up, he will be rendered less restless, preserve his strength more, and not so subject to
increase

increase of head-ach and delirium ; for, by sitting up in an erect posture, the blood will circulate with less force towards the brain, than in an horizontal situation ; and obstructions will not be so liable to be formed there, nor will the brain be so likely to suffer depression from a load of fluids.

After proper evacuations having been premised, some advise the application of blisters ; because, they dissolve the viscid blood, open internal obstructions, and soften the pulse.

Others are of opinion, that they never can be right *though a delirium should come on*, if the pulse keeps full, hard, and quick ; but think the head is better relieved by bathing the feet in warm water, or applying cloths squeezed out of it to them, and the inside of the thigh just above the knee—for the nervous system must be disturbed and agitated too freely where the heat continues great, the skin dry, with the pulse as represented.—hence blisters, while such symptoms appear, and the fibres are too tense, will increase the mischief, from the additional stimulus they occasion.

In delicate constitutions, where there is great proneness to nervous incitability, and muscular irritability rather defective, blisters may be useful, by regulating the motion of the nervous power, and not being capable of producing any great effect on the muscular fibres—but, in strong athletic habits, I should think the practice dangerous ; but yet, where the pulse in any constitution grows soft, and begins to flag, either from evacuations, or weakness of the system, brought on in the course of the fever, *particularly if attended with drowsiness, or disposition to constant slumbering*, towards the height or turn of the fever, at that time they will be found extremely beneficial—by rousing the nervous system, and assisting nature in producing a separation and ejection of the morbid cause.

Should what we have before advised prove ineffectual in preventing costiveness, as more powerful purgatives would be apt to raise too great a commotion, and impede nature in her salutary efforts, we must have recourse to glysters. (No. 25, 26.)

Towards the evening, in almost all acute complaints, every symptom increases much with respect to violence, and towards the morning abates ; but when the turn of the fever is at hand, the violence continues more uniform throughout, nature appearing to exert her utmost efforts to conquer the disease, by throwing off the offending matter—hence the agitation of the whole machine is extremely severe.

If now the skin grows soft and moist, the tongue loses its dryness, the urine begins to deposit a whitish sediment, and becomes less high coloured, and soon after a more profuse sweat breaks out,

out, the other symptoms abating of their violence, we may expect a happy termination, should these occur upon a critical day, particularly if a sound sleep comes on, followed by refreshment, loss of thirst, the tongue clearing away its foulness, and the head alleviated from its pain and uneasiness.

From these appearances we may conclude a crisis is begun; and in its progress, if the pulse grow gradually slower, falling some strokes in a minute below its healthful standard, we may be assured that things have taken a favourable turn, and that the patient is secure from danger.

But during this contest in the critical period, which will be for some days from the beginning to its termination, cordials may be thought necessary, the best of which is wine, given alone or in whey. If medicines to answer the purpose are thought more agreeable, to what we have delivered from No. 13 to 18, may be added other cordials.

But if I find nature in her critical intention points more to the kidneys than to the skin, I prefer joining the cordials to the solution of prepared kali and lemon juice, (No. 1.) if to the skin, to that of prepared ammonia. (No. 27.)

But sometimes, from all our efforts, we are not even flattered with a favourable issue—however we must not despair—nature often relieves herself at the moment we least expect it.

Therefore, when the constitution seems drooping, and nature appears almost exhausted, when general tremors come on, twitching of the tendons, delirium, and the patient parts with both feces and urine involuntarily—which appearances are always considered to be the result of strong nervous affections, giving the disease the most unhappy aspect—in this deplorable state we depend upon the repetition of blisters, applied in the following succession: 1st, to the back—2d, under the arms—3d, above the wrists—4th, above the knees on the inside of the thighs—and, 5th, upon the head, if violent pain and much disturbance there, points out the rectitude of such an application—and likewise mustard poultices, called sinapisms, to the feet, (No. 30.) and give volatile salts—camphor---musk, (No. 31 to 35.) in order to allay some of those convulsive affections which present themselves at this period---for which musk mixed with valerian is esteemed highly useful.

In cases of extreme languor, snake-root is a very valuable medicine, which may be given in infusion or powder. (No. 36, 37.)

As nature, under the violence of these oppressions, being relieved in one point, may have power probably to exert herself more generally from such relief, a VAPOR BATH, as it can be applied

applied in a bed-chamber, and has in dangerous cases been known to succeed, may be tried, as it seems calculated to take off, by its relaxing power, spasmodic constriction.

Sometimes in this disease, at an early period, people will be much afflicted with the head-ach, delirium, watching, or drowsiness, bleeding at the temples with leeches—applying blisters there—having the head shaved and rubbed with vinegar—or portions of the lungs of a lamb applied warm to the head—blistering and fomenting the legs, and applying mustard poultices to the soles of the feet, are useful auxiliaries to the general mode of cure above specified—as is also blistering the head:—or should they have any pains similar to those of pleuritic people, applying a blister over the part affected is beneficial.

Sometimes rheumatic affections will be a concomitant—in this case, large doses of nitre will be useful—and should any dysenteric appearances, such as uneasy pains in the bowels, propensity to go to stool, without producing any evacuation; a grain or two of ipecacuanha, given now and then, may act as gentle aperient, solicit the discharge of the irritating matter, and carry it out of the bowels. To me it obviously appears, that these applications are only to alleviate the symptoms arising from the local affection of a part, from a more general cause; whilst, at the same time, we must persist in the general mode of cure;—why we endeavour at their particular alleviation, is to prevent nature from being disturbed in her operations by these distressing or anomalous symptoms; as by inattention to them the danger might be increased, and the malady prolonged; for these symptoms, for the most part, are subdued by time alone, and the fever being kept within proper limits.

§ 3. NERVOUS FEVER.

This is so named because the *nervous system* appears to be the part most affected. It differs from the inflammatory fever in the part of the constitution attacked, and occurs in such as are dissimilar. Here the nervous system is defective, attended with little or no intenseness of vascular motion; blood also poor and thin, and the nerves extremely incitable. This is also called the slow fever, because it is slow in its progress compared with other fevers, particularly the foregoing.

DESCRIPTION. This fever makes its attack with dejection of spirits--loss of appetite--oppression--disturbed sleep, or restlessness--the patient often sighs and groans involuntarily--is frequently terrified, and affected with uncommon lassitude after exercise, tho' that should be slight, and at the same time has cold and hot fits succeed, and alternate with each other--he is troubled
with

with nausea, and a vomiting of insipid phlegm, which come on in a few days after the attack, with giddiness and pain of the head--extreme prostration of strength--no remarkable heat--no thirst--the pulse is frequent, weak, and sometimes intermits--the tongue continues moist, white, and is covered over with a viscid mucus--there is an oppression at the pit of the stomach, and the breathing difficult--the urine is pale, watery, and sometimes like milk whey--the face red, and flushes, at the same time that the feet are cold--the mind is slightly disturbed by ridiculous imaginations, which continues, but without any violent delirium--sometimes immoderate sweats break out, or colliquative, dissolving looseness comes on--the senses lose their quickness, and become dull and heavy--with anxiety and fainting attending.

Towards the close, when nature appears almost worn out by the continuance of the disease; the tongue trembles--the extremities grow cold--the nails livid--they lose the power of sight and hearing--the delirium is converted into stupor, and a lethargic disposition--the feces and urine pass away involuntarily--twitching of the tendons comes on--and generally convulsions close the scene, in death.

CAUSES. The *remote* or *inducing causes* are said to be relaxed fibres, and a weak nervous system--too powerful evacuations--salivations from taking mercury too frequently repeated--immoderate venery--mental affliction--watching, and nocturnal study--moist and stagnant air of subterraneous jails and confined places; a crude and too thin diet, particularly of cold and watery fruit--watery and viscid drinks--rainy seasons--a moist and soft winter--and, in fine, all those things which by slow degrees debilitate the nervous system.

The *proximate* or *immediate*, great apparent incitability in the nervous system--a lentor, and viscosity of the serum, lymph--and thin humours with acrimony from contagion or obstruction--and a torpor, or defect of intenseness of motion in the vascular system; which are obvious from the blood taken away--phlegm thrown up from the stomach--and appearances agreeing with diseases arising from corrupted and contaminated serum. Hence it is supposed to exert its influence upon the most minute, serous, lymphatic, and nervous vessels; but rather upon the whole brain, as the pale wan colour, paleness and dryness of ulcers, a deprivation of the senses, extreme debility, and suppurations in the brain upon dissection, point out.

CHARACTERISTIC SIGNS. In defining this disease, I should say, it was an affection of the nervous system, in which there was apparent incitability, with a thickness of the serum, lymph, and thin humours--a torpor, or defect of intenseness of motion

motion in the vascular system, independent of nervous incitability, discoverable by slight chills--shivering--and uncertain flushings of heat--sinking and dejection of spirits--frequent involuntary sighing--general weakness--quick irregular pulse--pale coloured urine--remarkable propensity to spasmodic affections--no distressing thirst--sometimes retching, though nothing but simple phlegm evacuated.

CURE. As affections of this kind will arise from different kinds of foulness in the first passages, if we are called in early, its progress is easily prevented, by gentle emetic, (No. 11, 12.) and small doses of rhubarb, manna, castor oil, and some such gentle aperients, (see Emollient, and astringent Aperients, under Cathartics, page, 172.)—but if in too advanced a state, when the fever is completely formed, which is almost always the case, it will pursue its course in spite of all our endeavours.

The indications of cure, are to guard the habit so far, that the worst effects may be prevented; and, as in inflammatory fevers, we endeavour to weaken the system, we must in this attempt to invigorate the constitution, and support it by mild and proper cordial stimulants, not given at first of too powerful a nature.

Bleeding, apt to be applied on slight occasions, is here almost always injurious, no disease bearing that operation so badly. At the attack, we should wait for nature pointing out the precise disposition of the malady. Sometimes, indeed, in some epidemic constitutions of the air, when at the commencement it attacks habits which are full of blood, putting on the appearance of inflammatory affection, a few ounces may be taken away, but not repeated.

Where there seems to be a determination of blood to the head, discovered by pain, heaviness, and giddiness there, as sometimes happens, leeches may be applied to the temples; or cupping at the back part of the head may be had recourse to; but not on trivial occasions.

There are some symptoms which shew themselves, such as difficult and oppressed breathing, and are called peripneumonic; but these arise not from an inflammatory cause; as the breath is not hot, nor is there any cough, nor different degrees of pain; but the pulse is small and contracted, and the extremities cold—these shew the affections to be nervous, not vascular;—bleeding would therefore be highly injurious. From their local, as well as general effects, mild emetics are certainly useful, from unloading the stomach of any viscid materials, and giving an opportunity for medicines to communicate their effects to the habit and nervous system more freely, by having the internal coat of that organ

more openly exposed to their action—and here ipecacuanha is preferable to tartarized antimony, as it weakens less the influence of the nervous system. (No. 38.)

The body should be kept open by gentle aperients (172) *only*, as common purges at the onset have produced sinking of the spirits, faintings, and other distressing symptoms—or domestic glysters, (No. 25.) may be administered, in case of costiveness, every second or third day.

Blisters applied through the whole course of the disease, succeeding one another, with moderately cordial and diaphoretic medicines, (No. 27 to 29.) and a well-regulated diet, are what must be chiefly depended upon; for these dissolve the viscosity of the serum, invigorate the system, and render the nerves more uniform and powerful in their action—hence promote insensible perspiration, or a gentle moisture on the surface of the body; but they should not be pushed so far as to induce profuse sweating, for a continued sweat exasperates the fever.

To the diet we should be particularly attentive, in order to support the strength of the patient; for these fevers are apt to be of long duration; and this should be of the stimulant, cordial, and nutritious kind—of which the sick should be solicited, to take frequently in moderate quantity.

White wine whey, thin gruel with wine in it, may be used freely, or wine and water—and particularly towards the termination, chicken broth, beef-tea, thin jellies of hartshorn, sago, and panada with wine. Indeed wine alone may be liberally administered, especially if the pulse grows soft upon its use, if there should be lowness, with a softness of the pulse, and a low drowsy delirium; for under these circumstances it produces sleep. I have known patients, particularly one lady, take three pints in 24 hours with advantage; but it has been affirmed, some quarts have been given in the same space of time.

All the liquids, if desired, may be drank cold, as they are only necessary to be prohibited in cases of local inflammation.

There is little doubt but a judicious and well-regulated diet, with the use of blisters, well-timed and well-applied, will perform a cure—taking care to keep the patient as quiet as possible both in body and mind—He should be kept only of a moderate warmth, neither exposed to too great heat or cold; and his spirits exhilarated as much as possible, by consolatory conversation of his medical attendants, and certain promises of recovery, dissipating all gloomy or unpleasant ideas.

With regard to the application of blisters, so great appears to be their use, that some necessary rules should be pointed out.—

They

They should certainly, in order to reap the greatest benefit, be applied at first, as soon as we know the precise nature of the malady; but if neglected till the system manifests high degrees of incitability, discoverable from acuteness of sight, touch, and hearing; they must be omitted till some degree of insensibility makes its approach—for, *in the first instance*, they may prevent the accession, or alleviate the violence of the symptoms—*in the second*, they would increase them before the period stated.

As the blisters are only applied to promote stimulus, not any evacuation, because that would tend to debilitate the system, and be of disservice; therefore, as soon as the blister is fully raised, it should be cut, the aqueous fluid let out, and nothing applied to the part to increase the discharge. In the first instance, some have advised them to be put upon the legs; but, in case of drowsiness and stupor, upon the head, and sinapisms to the feet; to which should the last give too great pain, they may be changed for poultices of milk and bread.

In order to relieve the peripneumonic symptoms, (217) blisters to the arms, thighs, or legs are proper, with gentle cordial medicines, (No. 13 to 15.) with the addition of acetated ammonia, or the cordial saline draught, (No. 27.) may be administered, cordial mixtures, or julep occasionally, (No. 13, to 15. 28, 29.) or sal volatile, from 20 to 40 drops in mustard whey.

After the continuation of this fever for ten or twelve days, or longer, should a remission come on; that is, should it at times appear to abate much of its violence, and then come on again—or should sweats too much exhaust the patient, Peruvian bark, administered with cordials, is highly proper, in such forms as the stomach will best bear, either infused in wine, in decoction, or infused only in hot or cold water, (No. 39 to 49.)—though the first form is esteemed the best, sometimes it is more agreeable to the stomach in some other mode.

In the declension of this fever, where the remission or intermission was very distinct, Huxham gave the bark conjunctively with the saline draught, and found it more efficacious.

Bark also tends to prevent or check mortifications, which sometimes come on from pressure by long lying, blisters, or sinapisms.

In cases of tremblings, twitching of the tendons, and convulsions, musk, in doses, according to the violence of the symptoms, and mixing it with valerian, as adding to its efficacy, (No. 31 to 35.) are beneficial.

In cases of looseness during the course of the complaint, if moderate, they may not be dangerous; still if profuse, they

should be checked, though not entirely stopped—they may be moderated by slight doses of rhubarb and opiates, or absorbent or stringent juleps. (No. 42, 43.) The white decoction and red wine will be a proper drink.

Or, we may endeavour to promote gentle sweat, in order to divert the fluids to the skin, by mild opiates, as camphorated tincture of opium, from twenty to forty drops, or the opiated confection, from one scruple to half a dram to a dose, may be added to any of the cordial mixtures, (No. 13 to 15. 28, 29.) and given as directed in the absorbent juleps.

And, lastly, if aphthæ, or thrush, should come on, attended with ulcerations of the throat, here detergent gargles are useful, (No. 44 to 47.) and gentle emetics, (No. 11, 12. 38.) But if swallowing is nearly obstructed by a quantity of viscid phlegm, stronger may be administered, which will be formed by increasing the dose of ipecacuanha, or tartarized antimony in each.

Though, should a salivation come on without aphthæ, and that pretty freely, Dr. HUXHAM considers it, as it really is, a favourable sign—for, says he, “when this happens, with a kindly moisture of the skin, I never despair of my patient, however weak or stupid he may seem.”

As there seems to be so much danger in this fever, from the very beginning to the termination, it may afford some benefit to be acquainted with those symptoms which may give us flattering hopes; and to know those from whose appearance we may be enabled to prepare ourselves for the fatal catastrophe.

If the delirium should be slight, no great debility—if the pulse should, upon the administration of cordials, become more full; and about the termination of the disease, a gentle sweat or looseness, but particularly a salivation without aphthæ, come on—if any tumors appear about the ears—and a miliary eruption shews itself, without any profuse sweat having preceded, we may have reason to expect a *favourable conclusion*—but if a strong delirium should continue above four days—if there should be copious evacuations—a profuse unseasonable sweat from the chest, head, and neck—the feet and legs only more dry and cold—twitching of the tendons—trembling of the hands and tongue—a colliquative or dissolving looseness—with a weak pulse---loss of sight---and impeded deglutition, accompanied with an hiccough---should the hands grow cold---the fauces livid---blood flow from the vessels---and spots like flea-bites appear---there can remain little hope of escaping the most fatal consequences.

With respect to a deafness coming on, it has been considered by some as a favourable omen, by others the reverse; at best it is but of dubious import, and not to be depended upon; for from experi-

experience I can speak, that I have seen it an attendant symptom on both death and a recovery.

§. 4. PUTRID, OR SANGUINEO-PUTRESCENT FEVER.

Which term I think applicable, because the mass of blood appears to be materially and principally concerned in this fever---for in those of which we have before treated, the chief disturbance has been created primarily in the vascular and nervous system.

But it may be asked, how comes it that this fever sometimes begins its attack with strong symptoms of an inflammatory, at others of a nervous, fever? This variation happens most likely in its different degrees, adequate to the firmer or looser cohesion of the particles of blood.

For if putrid matter was to be generated in, or absorbed into the habit, whose blood was of a firm texture, and vascular system had proper tension, it would be longer before indications of absolute putridity having taken place in that constitution would present themselves, than if the nervous system had been in a state of relaxation, and the blood thin and poor. There can be little doubt of this fact---and that this deviation is owing entirely to the nature of one constitution being able to resist the effects of the putrid cause longer than the other. And, indeed, if we consider that those whom experience has pointed out to us most subject to this disease are, the infirm; such as labour severely, and live in a state of poverty; the luxurious and indolent; the pensive and melancholic; those who sit up late; those of cold phlegmatic constitutions; we shall need little other confirmation of our assertion.

DESCRIPTION. Here we shall enumerate the general catalogue of symptoms, and then specify such as bespeak its commencement; in order, as early as we can, to be enabled to distinguish this fever from the two foregoing, as success greatly depends upon this knowledge; they requiring essential deviations in some respects in our modes of cure---for the accomplishing of which much depends on the method of treatment at the onset.

In this fever the *heat* of the body is intense, remittent, and gives a smarting sensation to the fingers of those who apply the hand to the skin of the sick, though at first not so great as in inflammatory fevers, still daily increasing---the *pulse* intense, small, and unequal---there is a *pulsation of the arteries*, which run up into the head through the neck into the brain, and those of the
tem-

temples—*extreme weakness and prostration of strength*, and that very often sudden---the patients are *dejected*, and *forebode the worst consequences*---they are oppressed with *nausea*, and *vomiting* of dark-coloured bile---*pain of the head and temples*---have their *eyes inflamed, full, heavy*,---and a fixed pain, often severe, over both *eye-brows* and *at the bottom of the socket, or orbit*---their *complexion* of a dingy hue---a ringing in the *ears*---their *breathing* is difficult, interrupted by *sighing*---and the *breath* strong, or *foetid*---they are troubled with *pains in the stomach, back, and limbs*---they lie down with *uneasiness*---tremble---are *delirious*---the *tongue* at first is white, afterwards black and dry---the *lips* and *teeth* covered with a thick foul *fordes*---the *blood* livid, much broken, or very weak in its texture, and quickly runs into a putrid state---their *thirst* insatiable, attended with a bitterness of the *mouth*---the *urine* in the beginning is of a pale colour, but in progress of the disease very red, nay sometimes black, dropping down a dark-coloured sediment like soot---the *sweats* are foetid, and frequently appear tinged with blood---the *stools* smell offensively, are sometimes livid, black, or bloody---small *livid spots*, like flea-bites, called *petechiæ*, and, if broader, *vibices*, make their appearances---also *hæmorrhages, aphthæ, ulcerations of the fauces*, and *hiccough*, and foetid, sanguinary, dysenteric affections, probably from internal ulceration and mortification, determine hastily the fate of the patient,

CAUSES. Those which are *remote* or *inducing* are said to be, feeding too much on animal food, particularly fish---eating constantly, as the sailors do, salted, and half corrupted flesh, and drinking putrid water---being in habits of taking alkaline, fixed, and volatile salts, and aloes---corrupted fruit---moist southerly winds, attended, or rather preceded by great heat---vapor of stinking waters---or from fens nearly dried---or from putrid animal or vegetable substances---the stagnant and foul air of hospitals, ships, prisons, and workhouses---feeding on corrupted grain---contagion---or any kind of putrid effluvia---for these dispose the fluids to become putrescent.

Those which are fixed to be the *proximate* or *immediate causes* are, a putrid dissolution of the humours, particularly of the red particles, as we have a right to conclude from the effect of putrid ferments dissolving and breaking down the texture and tenacity of solid and fluid substances wherein it takes place.

Not only from the symptomatic appearances of this disease have we reason to be apprehensive of the most fatal consequences in general, but we shall be further confirmed, on the dissection of those who die of it, which shew the brain and viscera, particularly

cularly the stomach and intestines, in an inflamed, and often in a mortified state.

CHARACTERISTIC SIGNS. In order to distinguish the putrid fever in its earliest attack, or very soon after, we must observe, that the degrees of *debility, oppression, and nausea are more considerable* than in any other fever: the *prostration of strength sudden and violent* has for its associates *extreme despondency, or insensibility, and want of apprehension* to an uncommon degree, which bespeaks great danger.

The *loss of appetite, or loathing of food, sickness, languor, and dull pain, of the head*, similar to what happens in the two former fevers before described, which attend, when it comes on, as it sometimes does gradually, *are in the beginning always more severe and sudden than in the inflammatory, though seldom so much so as in the nervous fever.* Besides, the smallness of the pulse, the dejection of spirits, the broken texture of the blood, the purple spots, and putrid state of the excrements, distinguish it *from the inflammatory fever.* The degree of heat, the very high-coloured urine, the thirst, the spots, and putrescency, *from the nervous fever:* And its formation is rendered perceptible by coldness and shivering, which has for its associates nausea, vomiting, giddiness, confusion of the head, extreme and sudden prostration of strength.

CURE ; The indications of which are, to endeavour to support the strength, counteract the putrescent acrimony, and regulate the action of the nervous system, by giving strength and activity to the debilitated fibres, correcting the putrid state of the fluids, and promoting the discharge of morbid matter.

And under some circumstances, bleeding in this fever at the beginning has been advised, where it has attacked robust constitutions full of blood ; and here, perhaps, once it may be right ; but not without the symptoms run to an alarming height, would I advise the operation ; and then only in order to prevent the fatal effects which might be induced by the violence of some of them : for, though the pulse should be at first full and strong, on taking away blood it soon sinks, and sometimes so much, that we labour in vain afterwards to get it raised. Without, therefore, we have evident signs of an inflammatory state of the blood, and that the brain, lungs, or some other of the vital parts are threatened with inflammation, we should never bleed—and, under the above circumstances, then *only in the beginning* should a few ounces be taken away, merely as an alleviator of a dangerous symptom.

Afterwards the first passages are to be cleared from their contents by gentle emetics, (No. 11.) giving small doses of antimonials,

nials,

nials, and these repeated every second hour. (No. 6 to 9.) For wherever the symptoms, which seem to indicate the use of the lancet, are violently urgent, *they alone* are the safest applications. But we should be careful not to occasion profuse discharges, which may produce too great lowness. If the antimonials cause not too or three stools, a gentle aperient may be given, (No. 22 to 24—49 to 51.) or glysters, (No. 25, 26.) which may be repeated every third day.

These things being premised, our chief dependence is on such medicines as give strength and power to the system, and some of those called antiseptics, or correctors of putrescent acrimony, (Page 193, 194, 195.) (No. 39 to 41, and 52 to 54.) particularly those fruits which have sweetness coupled with acidity, (Page 193.)—the antiseptic whey, (No. 48.)—fermented, or mineral acids, (Page 194.)—camphor, (Page 149.) (No. 15, 54.)—and bark, (No. 39 to 41, 52, Page 194.) particularly, which has been known to produce astonishing effects in a highly-dissolving state of the blood, where hæmorrhages have from that cause been produced. With these medicines we should begin, as soon as ever we perceive the dissolution of the blood has taken place, from the appearance of purple spots or hæmorrhages; not waiting, as in other malignant fevers, for any remission; for it is on bark, camphor, and wine we must chiefly depend for success in these cases, coupled in some of hæmorrhages with astringents; to which we shall soon advert.

I would not advise, as in the cases of nervous fever, the use of stimulants in conjunction with bark, (No. 40, 41.) but where the nervous system appears to be extremely torpid; then, I think, they give great power to that, and render it more active; for I am fully persuaded, that it produces its good effects, by giving firmness to the solids, equability of action to the moving powers, preventing the effects of putrid dissolution, and enabling them to separate and throw off the morbid materials, rather than correcting the acrimony, or preserving the texture of the blood by any other means. And this seems in a great degree to be corroborated by the opinion of HUXHAM, when speaking of these fevers, whose practice in these complaints was very considerable, says, “ Though nature very frequently affects to discharge the
“ morbid matter in putrid malignant fevers by vomits and
“ stools, yet her more constant efforts are through the pores of
“ the skin;—and I solemnly assert, I never saw these fevers com-
“ pletely carried off till more or less of a sweat ensued; if it
“ proves moderately warm, and equally diffused over the whole
“ body; if it comes on about the state of the disease, and the
“ pulse grows open, soft and calm a little before, and during its
“ conti-

“continuance; but if very profuse, cold, clammy, or partial about the head or breast only, we have much more reason to fear than to hope from it. If profuse sweats break out in the beginning, they are generally pernicious, should a fever supervene.”

Under the circumstances recited above, though blisters are said not to be useful in the beginning, because the nervous system shews no signs of torpor: yet are they often succeeded with happy effects, when people become stupid, drowsy, and insensible; and, indeed, at any time, if the pulse is very low, the urine and excrement pass off involuntarily, which I have observed in an early stage.

Wine, as it is an universal cordial, so it is the best, which may be given liberally; amongst the most eligible of which are claret, red port, and old rhenish; or, where they cannot be had, from their dearth, ale or porter may be used. As for food, gruel, panada, sharpened with orange or lemon juice, roasted apples, fruit of all kinds—for *drink*, the wines above mentioned mixed with water, lemonade, orangeade, wine wheys of different sorts, apple water mixed with wine, vinegar whey, old sound cyder, and all these liquids of an aciescent nature, or which correct putrescency, should be indulged in.

The room in which the sick is confined should be well ventilated, vinegar sprinkled on the beds, and round the room, fresh flowers and aromatic herbs strewed about; the patient should have clean linen often renewed, and the stools be removed as early as possible, whether they pass voluntarily or otherwise; for nothing refreshes the sick more than cool air and cleanliness.

By the means here generally described we shall commonly so assist and invigorate the constitution, as to enable it to throw off the more morbid matter, which is done by various ways, but most frequently by sweat, to assist in which operation, CAMPHORATED VINEGAR is strongly recommended, (No. 55.) but, if joined with an opiate, HUXHAM says, it is the most certain sudorific in nature—the solution though, by itself, promotes perspiration and gentle sweat more certainly than any other medicine; besides where mild stimulants are necessary, it heats less than volatiles, or ardent spirits.

Nature sometimes contrives the mode of expulsion for the morbid matter by the bowels, hence a diarrhoea, which, if attended with breathing sweats, or a warm moisture upon the skin, is always serviceable, and we may flatter ourselves that this is a successful effort.

At others, she, relieves the habit by abscesses, formation of
F f matter

matter in different glands, (Page 25.) such as those under the ear, the arm-pits, or groin; or, by throwing down highly acrimonious and corrosive humours into the legs, about the hips, or mostly the lower part of the back, assisted in this effort by continually lying—hence is mortification of the integuments induced, forming thick sloughs, which leave deep, spreading ulcers, from a supply of a corrosive fluid called ichor. Here we must rely chiefly on Peruvian bark, to produce, by its invigorating power, a separation of the parts mortified.

But sometimes, whilst we are exerting ourselves to promote every good purpose, by a plan judiciously conceived, and well selected applications, some accidental occurrences will arise in different parts, which, if neglected, or judiciously managed, will frustrate our intent, and every effort of nature. Whatever, therefore, threatens to sink the patient, or disturb nature's general operations, must be, if possible, checked, or totally subdued.

Should a *hæmorrhage*, as sometimes happens, come on, vitriolic acid may be added to the bark decoction, (No. 53.) or it may be given with any other vehicle, or the common drink may be acidulated with it, and given pretty freely. Should not these succeed, alum, or alum-whey may be added, (Page 189.) or given in powder. (No. 56.)

Should a *profuse diarrhœa* make its appearance, and give us leave to suppose that the constitution by this means would be enfeebled, it must be restrained only gradually; for if we lock up the matter suddenly, without supplying some other more gentle mode of passage out of the machine for the corrupted fluid, internal mischief might be occasioned in the intestines, by the irritation it would there produce.

We must therefore endeavour to determine the fluids to the skin, by some well-adapted diaphoretics, (No. 57, 58.) and, at the same time, should the stools continue copious, and extremely fetid, glysters of fixable air, with which some mild watery antiputrescent liquid is impregnated, or fixable air may be thrown up alone, for this is a powerful corrector of putrescent acrimony, and would take off the stimulus of those vessels which pour out their contents into the bowels, called exhalent, and render the medicines given more effectual in pushing forwards, or soliciting the humours to the skin.

Sometimes there will occur *violent vomiting*, which in this fever is not unusual.

This ought to be restrained, and generally our success in the attempt will be pretty certain, by giving the saline draught in a state of fermentation. (No. 59.)

By

By the means of this the offensive and foul matters in the stomach, and flexure of the duodenum, (42.) are supposed to be corrected, and thus, by removing part of the fomes, (that is, matter which created the uneasy sensations of the stomach, and was a means of supporting the febrile affections) of consequence lessen the nausea, and other symptoms indicative of its presence, as well as, in all probability, shorten the duration of the fever.

Another peculiar accident may happen, though perhaps very rarely, which we ought by all means to be guarded against. Bark, upon which we in this fever place such dependence, will not agree with all constitutions, decoction of pomegranate bark, and chamomile flowers, may supply its place, and is said to answer every purpose, (No. 60.)

Though it may be sometimes the case that bark will not agree with our patients in the common modes of administration, still I have never found but in some of its forms it may be made to answer every purpose.

By beginning with the cold infusion, and gradually increasing its power, I have been enabled to administer it in all its complicated forms, and produced its desired effects.

Eruptions of different colours, red, purple, black, dun, or greenish, called petechiæ, strike out sometimes toward the close, or earlier, of different sizes; but these seldom bring any relief from oppression, sickness, or other distressing symptoms—the redder they are the better—and it is a favourable sign where those which are of a black or violet colour become of a brighter colour; for these coloured spots bespeak a high degree of putrescent acrimony, and activity, bringing on a dangerous state of sanguinary dissolution—so the change of colour to that which is most favourable, shews the degree of mischief lessening, and their causes growing weaker.

About the eleventh or fourteenth day, *miliary eruptions* with a white appearance break forth; sometimes succeeding profuse sweats, which not unfrequently happen at this time. These seldom relieve; but if there appears a red, smarting, itching rash, or large, fretting watery bladders, they are serviceable. But we may have hopes of recovery from the breaking out of a scabby eruption about the nose, lips, and corners of the mouth—the more angry and hot it is, the more favourable the omen. To these we may add, if the symptoms are mild—if a looseness or foetid sweat should break out at the decline of the disease, there is considerably less danger, than where there is no thirst—the fauces inflamed—a large crop of black eruptions, which suddenly recede—a laborious respiration after their eruption—a swelling of the belly with looseness—foetid and ichorous stools—cold-

ness of the extremities—and convulsions—for these afford most calamitous portents.

Indeed, with regard to the aphthæ or thrush, of whatever colour, they carry along with them no pleasing omen, when they break out on the inside of the mouth—for they are soon succeeded by putrid ulcerations of the throat, &c. bringing along with them difficulty of swallowing, and hiccough, in the first instance—afterwards, fœtid, bloody, and dysenteric evacuations, probably from ulceration and mortification of the intestines.

But when patients have fortunately passed the stage of fatality, they often become dropsical, or have watery swellings in their legs, we must not, under these circumstances, depend on purgatives to evacuate the watery fluid, as in other dropsies—but bark, (Page 194.) steel, and the natural chalybeate waters, (Page 139.) to strengthen and invigorate the vascular system, and promote absorption. (No. 61, 62.)

But, in order to prevent a relapse when the crisis is perfected, from putrescent or offensive matters accumulating in the first passages, a gentle purgative or two, (No; 2 19, 20, 21.) is absolutely requisite—and a course of aromatic bitters, joined with chalybeates, (No. 63, 64, 65.) or some of the chalybeate waters, (Page 139.) with light, nutritious, easily digestible food. (Page 209.)

And here we must observe, that where we find any prevailing acid upon the stomach, we would advise steel to be given in substance—where not, some of the chalybeate salts, of which the tartarized iron, (Page 139.) is supposed by some to be the best, and may be given instead of vitriolated iron—and it is said to have proved efficacious where all the others have failed: and is more soluble in the animal fluids.

The medicines above prescribed, or some others of the same kind, are thought necessary, in order to recover the tone of the viscera, and enable the digestive powers to assume their wonted power—which being neglected, a foundation may be laid for chronic complaints, by the constitution's being loaded with acrimonious and ill-conditioned humours, and subjecting the patient to jaundice, dropsies, consumptions, or some such similar mischief.

We have now finished our account of simple fevers: and as we consider all the others, whatever their appellation, to belong to one of the foregoing, simply, or conjointly, we shall be under the necessity of having recourse to some of the modes of cure, here specified, in all; and have therefore chosen here to add the forms of medicines made use of in these fevers, referring in the body of the work occasionally to the more general catalogue, that
our

our reader may be supplied with a larger number of materials, from whence he may make his own selection.

Besides, he will, by closely studying these, be enabled to see the nature of medicinal combination; and will pave the way for his more readily understanding the management of fevers in a more complicated state.

Nevertheless, notwithstanding we think the remedies here supplied are sufficient for enabling the practitioner to be as useful as possible in all febrile affections, we shall make occasional additions in each, where any circumstances of advantage present themselves, either from their peculiarity, or any local affections with which they may be combined.

THE FORMS OF MEDICINE

PRESCRIBED AND REFERRED TO IN THE
SIMPLE CONTINUED, INFLAMMATORY, NERVOUS,
AND PUTRID FEVERS.

No. 1. SALINE MIXTURE.

Take kali prepared,	1 dram.
Lemon juice,	2 ounces 2 drams.
Distilled or boiled Water,	5 ounces.
Sugar,	2 drams.
Mix.—DOSE. Four table spoonfuls every two or three hours.	

2. NITROUS POWDER.

Take Nitre powdered,	6 or 10 grains,
Crabs Claws prepared,	20 grains.
Sugar,	30 grains.
Mix—and take it in the manner above recited.	

3. COOLING SALINE PURGE.

Take milk of Almonds, or Decoction of Barley, in which dissolve	} 10 ounces.
Vitriolated Natron,	1½ ounce.
or Tartarized Natron,	1 ounce.
or Vitriolated Kali,	½ ounce.
Manna,	1 ounce.

DOSE.

DOSE. Four table spoonfuls every third hour, till the desired effect is produced.

No. 4. ANODYNE, OR QUIETING DRAUGHT.

Take Distilled Water,	1½ ounce.
Spirit of vitriolic Æther,	30 drops.
Tincture of Opium,	15 drops.
Syrup of White Poppy Heads,	3 drams.

Mix.—

or,—5. SALINE ANODYNE DRAUGHT.

Take Kali prepared,	10 grains.
Lemon Juice,	2 drams.
Distilled Water,	1 ounce.
Tincture of Opium,	15 drops.
Syrup of White Poppy Heads,	2 drams.

Mix.—

6. ANTIMONIAL MIXTURE.

Take of tartarized Antimony,	3 grains.
Rose Water,	6 ounces.
Syrup of Sugar,	3 ounces.

Mix.—**DOSE.** One or two spoonfuls every six or eight hours.

or---7. ANTIMONIAL POWDER.

Take Tartarized Antimony,	3 grains.
Prepared Crabs Claws,	5 drams.
Sugar,	1 dram.

DOSE. Twenty or thirty grains.

8. ANTIMONIAL SALINE MIXTURE.

Take Saline Mixture, (No. 1.)	8 ounces.
Tartarized Antimony,	1½ grain.

DOSE. Four table spoonfuls every fourth or fifth hour.

or—9. ANTIMONIAL BOLUS.

Take Antimonial Powder,	3 grains.
Conserve of Roses,	1-2 a scruple.

Syrup of Sugar, sufficient to form a bolus, which may be repeated every sixth hour—or the Antimonial Powder may be given with some of the absorbent Earths, as in No. 7. and the dose of Antimonials may be augmented or decreased as the stomach will bear them.

No. 10. NEUTRAL VOLATILE SALINE MIXTURE.

Take Acetated Ammonia,	2 ounces.
Peppermint Water,	6 ounces.
Tartarized Antimony,	1 grain.

Syrup

Syrup of Saffron, 1-2 an ounce.
 Mix.—DOSE, &c. similar to No. 1.

11. EMETIC MIXTURE.

Take Tartarized Antimony, 6 grains.
 Distilled Water, 6 ounces.
 Syrup of Saffron, 1-2 an ounce.
 Mix.—DOSE. Two table spoonfuls, repeated every half hour,
 till the desired effect is produced.

or—12. EMETIC DRAUGHT.

Take Ipecacuanha Powder, 20 grains.
 Tartarized Antimony, 1 grain.
 Pennyroyal Water, 1 ounce.
 Syrup of Saffron, 1 dram.
 Mix.—Let this be administered in the evening, and the stomach
 well washed with chamomile-flower tea, thin gruel, or any o-
 ther simple aqueous fluid drank warm.

13. CORDIAL MIXTURE.

Take Peppermint Water, 6 ounces.
 Spirit of Nutmeg, 1 ounce.
 Aromatic Confection, 1 1-2 dram.
 Compound Spirit of Ammonia, 40 drops.
 Syrup of Saffron, 1-2 an ounce.
 Mix.---

or—14.

Take Cinnamon Water, 6 ounces.
 Spirit of Cinnamon, 1 ounce.
 Ammonia prepared, 30 grains.
 Aromatic Confection, 1 dram.
 Compound Spirit of Lavender, } of each 1-2 an ounce.
 Syrup of Saffron, }
 Mix.—

15. CORDIAL CAMPHORATED JULEP.

Take Camphorated Mixture, } of each 3 ounces.
 Peppermint Water, }
 Tincture of Cinnamon, 1 ounce.
 Syrup of Saffron, 1 1-2 ounce.
 Mix.—DOSES. Four table spoonfuls every fourth or fifth hour ;
 and three at any time, when low, faint, or sick.

No. 16. CORDIAL STIMULANT BALUS.

Take Prepared Ammonia, } of each 5 grains.
 Camphor, }
 Aromatic

Aromatic Confection, 10 grains.
Syrup of Saffron, sufficient to form a bolus.

or—17.

Take Snake-root, } powdered, } of each 5 grains.
Contrayerva, }
Aromatic Confection, 10 grains.

Syrup of Saffron, sufficient to form a bolus, to be administered every four hours, washing it down with two or three table spoonfuls of the following julep.

18. CORDIAL JULEP.

Take Cinnamon Water, 6 ounces.
Tincture of Cinnamon, 1 ounce.
Syrup of Saffron, 1-2 an ounce.

Mix.—

19. PURGING DRAUGHT.

Take infusion of Senna, 2 ounces.
Manna, } of each 1-2 ounce.
Tincture of Senna, }
Rhubarb in powder, 8 or 10 grains.
Compound Spirit of Lavender, 2 drams.

Mix.—

or—20.

Take Rhubarb, } in powder, 25 grains.
Jalap, } 6 grains.
Cinnamon Water, 1 ounce.
Syrup of Orange-peel, 1 dram.

Mix.—

21. PURGING PILLS.

Take Rhubarb in powder, 30 grains.

Mucilage of Gum Arabic, sufficient to form it into pills
—or syrup may be added to make it into a bolus.

And of these forms may be taken in the morning early ; and when they begin to operate, worked off with weak broth, or thin gruel.

22. CASSIA DRAUGHT.

Take Distilled Water, 1 1-2 ounce,
Acetated Ammonia, 2 drams,
Tartarized Antimony, 1-6 or $\frac{1}{4}$ of a grain.
Cassia Electuary, from 10 to 20 grains.
Syrup of Roses, 2 drams.

Mix.---

Mix.—and let it be repeated once in four hours, till it produces the effect required.

No. 23. CRYSTALS OF TARTAR WHEY.

Take Crystals of Tartar,	1-2 an ounce.
dissolve them in	
Milk,	1-2 a pint.
and add Manna,	2 ounces.

24. INFUSION OF TAMARINDS.

Take Tamarinds,	1 ounce.
boil them in Milk Whey,	8 ounces.
then add Manna,	2 ounces.

Of each of these a tea-cupful, or more may be taken occasionally

25. DOMESTIC GLYSTER.

Take Milk,	} of each 4 ounces.
Water,	
Brown coarse Sugar,	1 1-2 ounce.
Common Salt,	1-2 an ounce.
Linseed, or Olive Oil,	2 ounces.

Mix.—

26. COMMON GLYSTER.

Take the Glyster Decoction,	8 ounces.
Epsom Salt,	} of each 1 ounce.
Syrup of Buckthorn,	
Linseed Oil,	
	2 ounces.

Mix.—

27. CORDIAL SALINE DRAUGHT.

Take acetated Ammonia,	1-2 an ounce.
Peppermint Water,	1 ounce.
Ammonia prepared,	5 grains.
* Confection of Alkermes,	20 grains.
Syrup of Saffron,	2 drams.

Mix.—

28. CORDIAL AROMATIC DRAUGHT.

Take Oil of Nutmegs;	4 drops.
rub them well with	
Sugar,	2 scruples.
to which add gradually	
Peppermint Water,	2 ounces.

Mix.—

* LEWIS'S Dispensatory improved. Page 363. Edinburgh; 1786.

No. 29. CORDIAL AROMATIC MIXTURE.

Take of Oil of Cinnamon,	40 drops.
Fine Sugar,	3 drams.
rub these well together, then add	
Cinnamon Water,	6 ounces.
Spirit of Cinnamon,	1 ounce.

Mix.—The Draught, or four spoonfuls of the Mixture, should be given as directed No. 15.

30. MUSTARD POULTICE.

Take Mustard Seed Powder,	} of each equal parts.
Crumbs of Bread,	

Strong Vinegar, sufficient to form a poultice; but when wished to be stronger, half an ounce of bruised Garlick; and one ounce of black Soap added.

31. MUSK BOLUS.

Take Musk,	from 8 to 30 drops.
rub them well with	
Fine Sugar,	40 grains.
to which add	
Ammonia prepared,	5 grains.
Aromatic Confection,	10 grains.

Syrup of Saffron sufficient to form a bolus, to be administered every four or five hours, with three table spoonfuls of the subsequent Infusion.

32. VALERIAN JULEP.

Take Valerian Root bruised,	1 1-2 ounce.
Boiling Water,	1 pint.

Infuse in an earthen vessel well closed, and let it stand till cold; to six ounces of which add Syrup of Saffron, half an ounce.

Mix.—

33. CAMPHORATED BOLUS.

Take Camphor,	} of each 5 grains.
Ammonia prepared,	
Aromatic Confection,	

Syrup of Saffron, sufficient to form a bolus, to be taken every fourth hour.

34. MUSK JULEP.

Take Musk Mixture,	6 ounces.
Camphor,	30 grains.

Myrrh,

Myrrh,

20 grains.

Syrup of Saffron,

1-2 an ounce.

Let the Camphor and Myrrh be well rubbed together, and then add gradually the Musk mixture—DOSE. Four table spoonfuls every three or four hours, or oftener in cases of great languor.

No. 35. MUSK BOLUS.

Take Musk,

10 grains.

Camphor,

Ammonia prepared,

} of each 6 grains.

Syrup of Saffron, sufficient to form a bolus, to be taken every third or fourth hour.

36. SNAKE-ROOT BOLUS.

Take Snake-root powdered,

20 grains.

Ammonia prepared,

8 grains.

Syrup of Saffron, sufficient to form a bolus, to be taken every six hours.

37. SNAKE-ROOT DRAUGHT.

Take Snake-root bruised,

6 drams.

Boiling Water,

12 ounces.

Infuse in a close vessel till cold; to one ounce and a half of which

add Ammonia prepared,

5 grains.

Aromatic Confection,

10 grains.

Syrup of Saffron,

2 drams.

Mix.—or from one to two drams of the Tincture of Snake-root may be added to any other of the cordial Draughts, and administered every fourth, fifth, or sixth hour.

38. IPECACUANHA EMETIC.

Take Ipecuanha in powder,

from 15 to 20 grains.

Pennyroyal Water,

1 ounce.

Syrup of Sugar,

2 drams.

Mix.—

39. VINOUS INFUSION OF PERUVIAN BARK.

Take of Peruvian Bark,

1 ounce.

Infuse it in White Wine,

12 ounces.

DOSE. Three spoonfuls every fourth or fifth hour.

40. CORDIAL MIXTURE, WITH BARK DECOCTION.

Take Peruvian Bark,

1 ounce.

boil it in one pint of water till it is reduced to 12 ounces, then let it be strained, and add

Tincture of Snake-root,

1 ounce.

G g 2

Aromatic

Aromatic Confection, 2 drams.
 Mix.—DOSE. Four table spoonfuls every fourth hour.

NO. 41. CORDIAL MIXTURE, WITH HOT OR COLD INFUSION OF BARK.

Take Peruvian Bark, 6 drams.
 Infuse it in ten ounces of *boiling* water for four, in *cold* for eight hours, then let it be strained, and add
 Tincture of Snake-root, 1 ounce.
 Compound Spirit of Lavender, 4 drams.

Mix.—DOSE. The same as (40.)
 or volatile substances may be added to any of these vehicles, as Salt, or Liquor of Hartshorn, Ammonia prepared. See Doses, P. 150.

If Bark should be disagreeable in every other form, it may be given in glysters, though in large proportion. Should the Powder, Tincture, or Extract, be more eligible, see the Doses, P. 193, 194.

42. ABSORBENT JULEP.

Take Crabs Claws prepared, 2 drams.
 Gum Arabic powdered, 3 drams.
 Cinnamon Water, 6 ounces.
 Syrup of Saffron, 4 drams.

Mix.—

or—43.

Take Chalk Mixture, 6 ounces.
 Spirit of Nutmegs, } of each 4 drams.
 Syrup of Orange Peel, }

Mix.—DOSE. Three spoonfuls of either often in the day, particularly after every loose stool.

44. DETERGENT GARGLES.

Take Infusion of Roses, 1 pint.
 Honey of Roses, 2 ounces.

Mix.—

or—45.

Take Lime Water, 4 ounces.
 Honey of Roses, 1½ ounce.

Mix.—

or—46.

Take Decoction of Barley, 10 ounces.
 Honey of Roses, 2 ounces.
 Muriatic Acid, 20 drops.

Mix.—

or—47.

or—47.

Take Decoction of Barley,	1 pint.
Simple Oxymel,	1 ounce.
Tincture of Myrrh,	1 ounce.

Mix.—

No. 48. ANTISEPTIC WHEY.

Take Cow's Milk,	1 $\frac{1}{2}$ pint.
Water,	$\frac{1}{2}$ a pint.

Let these be boiled together, and mixed with one ounce and an half of Seville Orange, or Lemon Juice; or mix only one ounce of Lemon Juice, and two of good old Rhenish, and strain for use.

49. ANTISEPTIC DRINK.

Take Crystals of Tartar,	2 ounces.
Dissolve these in one gallon of Water, and sweeten with Syrup of Orange Peel.	

50. ANTISEPTIC PURGING APOZEM.

Take Tamarinds,	1 $\frac{1}{2}$ ounce.
Boil them in Water from nine to seven ounces, then strain, dissolve	
Manna,	2 ounces.
Tartarized Kali,	1-2 ounce.

Mix.—

51. ANTISEPTIC APERIENT DRAUGHT.

Take Tartarized Kali,	40 grains.
Manna picked,	1 1-2 dram.
Lemon Juice,	2 drams.
Distilled Water,	1 1-2 ounce.

Mix.—Any of these may be taken, (No. 49 and 50. in proper doses,) and repeated agreeable to the effect wanted to be produced.

52. ANTIPUTRESCENT DRAUGHT.

Take Tincture of Roses,	2 ounces.
Muriated Acid,	5 drops.
Syrup of Quinces,	2 drams.

Mix.—

or—53.

Take decoction of Bark,	2 ounces.
Muriatic Acid,	5 drops.
Syrup of Quinces,	2 drams.

Mix.—

or—54.

Take Camphor,	6 grains.
Myrrh powdered,	10 grains.
Let these be rubbed well together, and add gradually	

Decoc-

Decoction of Bark,	2 ounces.
Syrup of Lemon,	1-2 an ounce.

Mix.—Any of these may be taken every third or fourth hour, or oftener, if the exigencies of the case require.

No. 55. CAMPHORATED VINEGAR.

Take Camphor,	2 drams.
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Let this be rubbed down with a few drops of Spirit of Wine, then add

Sugar,	1 ounce.
Distilled Vinegar made hot,	2 pints.

Mix.—Dose. Two or three table spoonfuls, or more, every fourth or sixth hour.

56. ASTRINGENT POWDER.

Take Styptic Powder, of the Edinburgh Dispensatory,	} from 8 to 15 grains.
Gum Tragacanth in powder,	
Nutmeg powdered,	3 grains.

Mix.—To be given every third or fourth hour, with the Draught No. 53, as ordered above.

57. IPECACUANHA DRAUGHT.

Take Cinnamon Water,	1 1-2 ounce.
Gum Arabic,	2 scruples.
Chalk prepared,	1 scruple.
Ipecacuanha,	2 grains.
Syrup of White Poppy,	1 dram.

Mix.—

58. SALINE VOLATILE DRAUGHT.

Take Water of acetated Ammonia,	2 drams.
Cinnamon Water,	1 1-2 ounce.
Opiated Confection,	1-2 a dram.
Syrup of Saffron,	2 drams.

Mix.—Either of these, or three or four table-spoonfuls of camphorated Vinegar, (No. 55.) may be administered every fourth hour.

59. SALINE FERMENTATIVE DRAUGHT.

Take Kali prepared,	20 grains.
Peppermint Water,	1 ounce.
Syrup of Quinces,	2 drams.

to which add

Lemon Juice,	1-2 an ounce.
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and let the Draught be drank off whilst in a state of fermentation.

No. 6c. POMEGRANATE BARK, AND CHAMOMILE DECOCTION.

Take Bark of the Pomegranate Fruit, 1 ounce.
 Chamomile Flowers, 1-2 an ounce.
 Let these be boiled in
 Water, 24 ounces to 16.
 then in this Decoction, whilst hot, infuse
 Orange-peel, 3 drams.
 This must stand in a vessel covered close till it is cold, then
 strained off for use. To one ounce of this add
 Camphorated Vinegar, 2 drams.
 Muriatic Acid, 5 drops.
 Mix.—And let it be given every fourth hour.

61. STEEL PILLS.

Take Iron filings, or the Rust prepared, } of each 1 dram,
 Extract of Gentian, }
 Form these into 24 pills. Dose. Four.
 or—62.

Take Vitriolated Iron, } of each 1 dram.
 Extract of Bark, }
 Form 24 pills. Dose. Two. A dose of each of these may be
 taken, three or four times a day—or, one spoonful of Chalybeate
 Wine—or the Decoction of Bark, in the same mode as before
 prescribed.

63. AROMATIC BITTER DRAUGHT.

Take Quassia Wood, 2 drams.
 Infuse in one pint of boiling water, and, when cold, to one ounce
 and an half add
 Vitriolated Iron, 4 grains.
 Aromatic Tincture, 30 drops.
 Mix.—and administer twice a day; as may be also the following
 bolus:

64. AROMATIC BITTER BOLUS.

Take Chamomile Powder, from 10 to 20 grains.
 Myrrh in powder, 6 grains.
 Vitriolated Iron, 5 grains.
 Aromatic Powder, 6 grains.
 Syrup of Saffron, sufficient to form a bolus.
 or, the Steel Pills. (No. 61, 62.) may be administered in the same
 manner, with four spoonfuls of the following infusion:

No. 65. AROMATIC BITTER INFUSION.

Take Compound infusion of Gentian, 6 ounces.
 Tincture

Tincture of Bark,	6 drams.
Aromatic Confection,	1 1-2 dram.

Mix.—

66. OIL OF CASTOR EMULSION.

Take Oil of Castor,	2 ounces.
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Mucilage of Gum Arabic, or

Yolk of Egg, sufficient quantity to make it mix uniformly with Decoction of Barley,

10 ounces.

Syrup of Roses,

1 ounce.

Mix.—DOSE. Four table-spoonfuls every second or third hour, till the desired effect is obtained.

67. ANTIMONIAL APERIENT MIXTURE.

Take Distilled Water,

6 ounces.

in which dissolve

Manna,

1 1-2 ounce.

Tartarized Kali,

3 drams.

Antimonial Wine,

40 drops.

Tincture of Senna,

1 ounce.

Mix.—DOSE. Four spoonfuls every second or third hour till the desired effect takes place.

68. ASA FOETIDA MIXTURE.

Take Asa foetida,

1 dram.

Peppermint Water,

4 ounces.

Tincture of Opium,

12 drops.

Syrup of Sugar,

3 drams.

Mix.—DOSE. One spoonful every fourth, fifth, or sixth hour.

69. CAMPHORATED EMULSION.

Take Camphor,

1-2 2 dram.

Mucilage of Gum Arabic,

2 drams.

Let them be rubbed together, and add gradually

Peppermint Water,

6 ounces.

Tincture of Opium,

10 drops.

Syrup of White Poppy Heads,

1 ounce.

Mix.—DOSE. Three or four spoonfuls every fourth hour.

§ 5. MIXED FEVERS.

On treating on the different kinds of simple fevers, in the four former sections, we found, that according to their differences, we could discover which part of the system was in them particularly affected, and constituted the disease.

In

In the *simple continued*, the vascular system, with respect only to its motions being quickened.

In the *inflammatory*, besides the increase of motion, we perceive tenacity in the blood, and the strength and activity of the vessels augmented beyond what is natural.

In the *slow nervous*, the nerves seem to be primarily and chiefly affected, without any increase of vascular action, but rather a degree of torpor, and defect in their natural motion, with a lentor, or viscidty of the serum, lymph, and thin humours.

In the *putrid*, this nervous affection was accompanied at first, or soon after, with a putrescency of the fluids.

Now these peculiarities produce particular symptoms, which enable us to discover their nature. But the class of fevers ranked under this head have some of the immediate causes of these simple fevers so blended together, as the *inflammatory and malignant*, the *malignant and nervous*, the *nervous and inflammatory*—or so instantaneously and imperceptibly follow each other, according to the indications to be deduced from the symptoms, that we are at a loss where to refer them—as the distinguishing signs of the two different kinds will present themselves at the same time; for in some we find great nausea and extreme debility—great heat, with a quick, strong, and hard pulse—here are the characteristic symptoms of the inflammatory and putrid united, and form truly the MIXED FEVER. We will, however, now endeavour to explain how these arise.

When speaking of the brain, (Page 26, 27.) it was there said, that vascular irritability might be independent of nervous influence, though, for the continuance of that irritability, nervous influence is absolutely necessary. We must now farther observe, that vascular irritation always requires local stimulus for its support, and that the vessels may be affected without any strong indisposition of the nerves—and so on the contrary—and also that they may be conjointly affected from the same cause.

We likewise farther affirm, that morbid particles creating disease produce different effects, from their elective power upon the solids as well as fluids—hence from this source arises the different natures of specific fevers—and hence it is from the different combinations of the causes that the mixed fevers deduce their origin.

It seems to be an extremely difficult task to draw our ideas of these fevers into a small compass; or so to simplify them, that all which occur can be brought within the bounds of a concise definition; for every cause which can produce any of the foregoing febrile complaints; every part which can also be affected in them, may conjunctively appear so in these; and in such vary

different degrees, that we are puzzled to discriminate to which they can properly belong.

I can by no means agree with the idea of Dr. CULLEN, that the account he has given of the fever he terms *SYNOCHUS*, which obviously is his mixed fever, is at all adequate to comprehend the whole of those fevers, which come certainly under this term—for he says, “it is a contagious fever for the most part, composed of the inflammatory fever at the beginning, in its progress, and towards its termination, running into a nervous or putrid fever,”—which he names typhus—In all which there is no practical utility; for it may be only an inflammatory fever simply, thus terminating; which often happens to be the case—induced frequently by the violence of the disease, some accidental circumstances, or mismanagement. The continued, or vasculo-plethoric fever, which is simple, may, from the same causes, have the same termination.

Though we will not say that fevers of the above description may not sometimes occur, still we think that the complicated affections may always be in a great degree observed, and should be particularly pointed out.

From what has been advanced on this subject, the great difficulty of forming a definition to comprehend the whole of these fevers which may often meet our observation, is sufficiently obvious.

However, in defining these fevers in general, I should say, that the

ANOMALOUS, OR MIXED FEVERS,

were an affection of the nervous and vascular system, and sometimes conjoined with that of the mass of circulating fluids, producing febrile appearances; but, from the beginning, very often so indistinctly marked, having the inflammatory, nervous, and putrid symptoms so blended, that it is difficult to say to what kind they most peculiarly belong; and if we add to this Dr. CULLEN'S opinion, (Page 241.) the idea of mixed fevers will be tolerably complete;—and as we have given the whole of the symptoms separately under each of our former divisions, by considering some of them here in a conjunctive state; and marking those which are most prevalent; we shall be enabled to point out what is necessary to be done—to alleviate that species which is the most powerful in its action, consequently the most dangerous, and not altogether neglect the other—but this to execute properly requires profound medical knowledge, quick perception, nice discrimination, and experienced sagacity.

SYDEN-

SYDENHAM, to whom I shall refer my reader, has given us some histories of these kinds of fevers, under different names, either according to SOME PREVALENT SYMPTOM—as *the sudatory, or sweating, the comatous or drowsy*—or to THE INTENT OF NATURE, as *the depuratory, or cleansing*—the IMITATIVE, as *the variolous fever, or that similar to the small pox fever*—or to THE SEASON, as *the hyemal, or wintery*. We shall content ourselves with presenting, as a specimen,

The PUERPERAL, or CHILD-BED FEVER,

one of the most dangerous and fatal with which medicine is at present acquainted.

DESCRIPTION. This fever generally begins on the first, second, or third day, sometimes later, after delivery, with coldness or shivering preceding any pains of the belly, which are violent, and has a soreness attending over the whole region below the stomach, scarce capable of bearing the gentlest touch—the belly is sometimes soft—sometimes greatly swelled. The pains, though general, will affect some one part more particularly than another, and shoot from the loins to the groins and thighs, and sometimes affect the anus and neck of the bladder.

The pulse is quick and weak, though now and then, especially a little after the attack, strong and full—the skin is, for the most part, hot and dry, though sometimes cool and temperate; and, not unfrequently, intermediate sweats come on all over the body, and usually afford some alleviation—there is a constant pain of the head, chiefly the forehead, and above the eyebrows, attended often with a giddiness and restlessness.

The tongue has very different appearances, commonly white, soft, and moist, and will thus continue till near death—then it becomes dry, rough, and of a yellowish brown colour—a red line will sometimes run up its middle, with a whiteness on each side; the first is dry, the last moist—along with these there is also a great thirst.

The face is often flushed, sometimes of a deep red, or livid colour fixed in the cheeks. There appears in the countenance and eyes strong marks of anxiety and dejection of spirits. *From the very beginning of this distemper, the patients seem afraid of taking a full inspiration, hence is the breathing quick and short, appearing not to proceed from any affection of the lungs very often; and as the disease increases, so does the shortness of breathing.*

There is most commonly a cough as a concomitant;—load of the stomach—nausea---and vomiting of yellow, greenish, or black materials, frequently attend; but not invariably, though they

sometimes come on from the time of delivery, nay, now and then indeed precede it;---and, at the approach of death, what is vomited up is either green or black.

If blood should be taken away, it is in general fizy, with a quantity of yellow serum. The pain of the head, though very troublesome, is seldom attended, till a few hours before death, with delirium.

The urine at first is made with difficulty, and small in quantity, though removed by two or three stools; and, as the disease abates, it is declared by a deposition of the colour of brick dust, or whitish sediment.

At the commencement the habit is, for the most part, costive—sometimes regular—at others loose, discharging very foetid and brown coloured faeces—and in both states *flatulence attends*—and the general omens of approaching dissolution are, involuntarily evacuations from the bowels.

In high degrees of this disease, the patient, for the most part, lies on her back, seldom turns on either side, and never on her belly.

These are the general symptoms, by which the fever may be discovered, and which appear when the uterus is not affected—but if we perceive any of the symptoms which are declaratory of uterine inflammation, we may suspect the affection of that organ a participating cause.

CAUSES. Those which are considered as *the remote or inducing*, are,

Intemperance *during pregnancy*—too great fatigue, or total want of exercise—too high or too low living—costiveness, or the reverse—excess of joy or grief—moist and warm atmosphere, impregnated with putrid effluvia. *In lying in*, an overheated air—too warm a regimen—sudden frights---costiveness after delivery---and every accident which can obstruct perspiration---violence, and too great haste in separating the placenta---and binding up the trunk of the body with too tight bandages.

Those which are said to be the *proximate or immediate*, are,

Impeded circulation, or stagnation of the blood, generally in the vessels of the omentum, (37.) and intestines, chiefly the external coat of the small ones, (42.) sometimes of the womb, (51.) inducing in those parts inflammation, from the debilitated state of the vascular system there situated, brought on by the pressure of the pregnant womb; if causes (243.) occur which are capable of producing febrile affections in the habit---which affections are first most commonly of the inflammatory; afterwards, if the fever in this state is not cured, of the putrescent kind.

CHARACTERISTIC SIGNS. Common febrile symptoms, attended

attended with violent acute pains of the belly below the stomach, with soreness of the parts so great as scarce to bear the gentlest touch--dread in taking a full inspiration--breathing quick and short, nor appearing to proceed from affections of the lungs--and increasing with the disease---and in costiveness, or the reverse, flatulence.

CURE. The indications are to take off in the first instance, the inflammation, and prevent the humours from running into a state of putrescent acrimony---both which are effected by bleeding, if necessary, at the onset---purging---promoting the urinary discharge--or sweating--for in some of these ways this fever generally goes off, or is conquered, particularly by purging. If the termination is favourable, it occurs in three, four, or five days; if otherwise, from the fifth to the twelfth.

Hence, therefore, from what has been above delivered, our medical conduct is plainly pointed out.

If, at an early period of the disease, the habit is found abounding with blood, the febrile heat great, and the pulse full and strong, blood must be immediately drawn from the arm; and, should the body be costive, an emollient aperient glyster, (No. 25, 26.) should be, as soon as possible, administered; but should not this relieve by producing evacuation, some mild or emollient aperient medicine (Page 171, 172.) must be given, till a free discharge from the bowels is procured--for stools must at all events be had; on these, at first, are founded our greatest hopes of success; as by emptying the first passages, all distension from the contained fæces is taken off--flatulence lessened--irritation from the fæces avoided--and some degree of freedom given to the circulating powers of the parts affected.

But this should be done by the gentlest means--by such medicines as will not create sickness, as the cooling saline purge, (No. 3, 23, 24.) or oil of castor emulsion. (No. 66.)

Tartarized antimony, (No. 6, 7.) or antimonial wine in small doses, (Page 180.) are recommended to be given with this intent every second or third hour; but in their purgative effects, they are too uncertain--I therefore mix small portions of them with other purgatives, which I think quicken their effects. (No. 3. 22 to 24.) or the antimonial aperient mixture. No. 67.)

The first evacuations are generally foetid; but if they become afterwards less offensive, and the patient feels herself generally relieved, she most commonly falls into a sleep, and a gentle perspiration succeeds, which must be encouraged by such medicines as cool at the same time that they contribute to promote this purpose, such as tartarized antimony, antimonial powder, No. 6, 7, 8, 9.) and wine, (Page 180.) ipecacuanha, (No. 57.) nitre, (No. 2.) saline mixture, (No. 1.) to which may be added some slight opiate,

opiate, (Page 152.)---for these alleviate pain--- determine the fluids externally---and prevent their effects from internal distension, irritation, or acrimony, acquired from local solicitude of them internally, and accumulation; besides, they are diuretic, (Page 173.) and antiseptic, (Page 192.) without altringency, or being productive of heat.

Though, in order to keep up these effects, so essentially necessary for recovery, physicians in general have ordered mild cooling liquids *to be drunk cold*, if the skin was dry and hot, the fever and thirst considerable---and *lukewarm*, whilst the patient was in a state of perspiration; and very judiciously forbid the use of cordial stimulants, caudles, wines, and heating medicines of every kind:---yet some prescribe a cup of chamomile tea to be drunk every hour; but as this, like other bitters, is a stimulant, in the inflammatory stage of this disease it does not appear proper. But when symptoms of putrescency are approaching, or commenced, it may be productive of good effects, as it possesses antiseptic (Page 192.) powers. Small and repeated doses of lukewarm diluents, or watery liquids, as rennet, vinegar whey, lemonade, toast and water, slight infusion of malt, hydromel of Hippocrates, (Page 178.) or things of a similar nature, answer the purposes more safely, and full as effectually.

Though the greatest benefit is expected to be derived from clearing the first passages, attention should also be paid to the stomach;---and hence, if nausea, sickness, or vomiting, be one of the concomitant symptoms, that organ must be attended to, and unloaded of its contents; which will contribute also to promote the effects before mentioned; but as the womb is suspended by the broad ligaments, (51.) and those called round, (which are formed of a number of blood-vessels folded together, running from the corners of the womb in the duplicature of the broad ligaments, pass through a round aperture on each side the lower part of the belly, and are lost in the fat of each groin) vomiting should be promoted by the easiest means, by drinking copiously of chamomile tea, or warm water---for by filling the stomach sufficiently with fluid, its coats will act with ease, and the diaphragm (33.) and muscles of the belly not be thrown into continued and too powerful contraction, which would at this period be dangerous; because the ligaments are now in a relaxed state, and have not yet recovered their natural and healthful tone; hence would the womb be liable to be pretruded too much downwards by strong exertions of vomiting.

The case here drawn up respects only the most simple appearances of this fever; but it is frequently observed to be attended with several untoward circumstances.

1st. VIOLENT STITCHES IN THE SIDE, and PAIN AT THE PIT OF THE STOMACH will accompany those more constant ones of the belly, with a full, hard pulse, symptoms of inflammation, and that severe in proportion to the degree of violence.

2d. FLATULENCES in the stomach and colon (43.) will produce pains in the sides, shooting about the short ribs, which fluctuate; and occasion shortness of breathing, being only attended with a slight degree of fever.

3d. A COUGH not unfrequently is an attendant symptom—but seldom of much consequence.

4th. A LOOSENESS will sometimes appear at the very commencement of the fever, arising from acrimonious foulness in the first passages.

These we must endeavour to alleviate by well-adapted applications. *Under the first circumstances* bleeding must be had recourse to, and that repeatedly, if the violence of the symptoms continues, paying proper attention to the strength of the patient; taking care not to be too lavish in the quantity of blood drawn; for it is safer to bleed twice than once too copiously. Should the pains be violent, and the breathing much oppressed, blisters must be applied immediately, and repeated in proportion to the cause, first on the side affected, afterwards on the opposite side.

But should the pulse grow weak, and other symptoms of debility come on, declaratory of putrescency taking place, cordials with tonics, the most powerful of which are, volatiles united with bark—camphor—spirit of vitriolic or nitrous æther must be brought to our aid and mineral acids. See Putrid Fever, 221, § 4. from whence we shall be referred to a variety of prescriptions capable of answering our purposes.

And here we must observe, that the seneka root, (Page 179.) has been highly recommended in this, as well as other pleuritic affections; and is in this place considered as exceedingly applicable, as it is said to promote stools, urine, and sweat.

Under the second, we must apply to aperients, (No. 3. 23 or 24. 66, 67.) if these fail of success, by their operations, antispasmodics and sedatives may be tried, chiefly asa foetida, camphor, (No. 68, 69.) or musk, (No. 31. 34, 35.) with opium.

Under the third, in slight cases, oily emulsions may be administered, as in common coughs; but should there be at the same time a severe pain in the head, a blister should be applied between the shoulders—steams of vinegar and water inhaled into the lungs—gentle opiates, (152.) or spirit of vitriolic æther, (150.) administered.

Under the fourth, we are not to attempt to check the discharge
by

by the use of astringents; for from this every good is to be expected—we must here rather chuse to assist nature by the free use of those drinks we have in common recommended;—but should it not come on till the close of the disease, and be apparently critical, we must endeavour to support the patient under it, and aim at correcting the putrescent state of the habit, by antiseptics and cordials, both in glysters and by the mouth, and proper nourishment. The glysters should be emollient, diluting, and nutritious, composed of broths, beef-tea, chamomile infusion, with oil, and impregnated with fixable air;—wine, wine and water, may be given—also cordial mixtures with cinnamon, (No. 13, 14, 15, 18, 28, 29.) omitting the volatile substances, except in cases of faintness, when they may be occasionally added—the aromatic confection may be also changed for the extract of logwood, or the infusion may form the vehicle, (140.)—and after the diarrhœa has been checked by proper remedies, we must not forget the bark joined with aromatics, (No. 39 to 41.) and opiates. Besides, beef-tea, chocolate, hartshorn jelly, and such like, should be given by the way of nourishment—lime-water with milk; and, in fine, all such things as have the power of correcting putrescency, and preserving as much as possible the vigour of the constitution—hence rest of body, quietude of mind, cleanliness, and cool air, are essentially auxiliaries, and should be attended to with the greatest exactitude: and as lying-in women all have a greater or less degree of the predisposing cause in their habits, from the very nature, and unavoidable consequences of pregnancy, arising from the distension of the womb, producing impeded circulation, and vascular debility, the remote or inducing causes (244.) should be avoided—and from thence the accession of the fever prevented: and as there is no disease, when perfectly formed, more dangerous in itself, so difficult to cure, still so easy to be produced by indiscretion and ignorance, I would on every consideration recommend the preventive mode to be closely studied, and assiduously pursued.

We have now gone through that series of fevers, of the four first of which, *all*, either in their separate or conjunct state, whatever they be denominated, consist; and it clearly appears, that the parts of the constitution which are affected, are those which form the moving powers, (56.) and that it is by the morbid alteration of their action alone that fevers are produced; consequently, that it is from regulating their motions, and reducing them to a proper standard, that we can derive benefit in our curative, as well as preventive attempts; for instance:

IN THE SIMPLE CONTINUED FEVER we find a superabundance of blood and irritable state of the vascular system put into motion

tion by some remote cause, occasioning increase of action—*in order to cure*, we lessen the former, and decrease the latter—for here we suppose not any contamination of the circulating fluids to have taken place.

IN THE INFLAMMATORY FEVER we find to the superabundance of blood is added a morbid tenacity, and to the irritability a morbid augmentation of vascular strength and firmness—*in order to cure*, our efforts are the same as in the former case, only more powerfully, copiously, and quickly exerted, with intent to thin the fluids, and debilitate the force of vascular action, as well as lessen the quantity of blood, and decrease the quickness of vascular motion.

IN THE NERVOUS we find a different constitutional state of the moving powers—a torpor of the vascular system—ropy viscosity of the serous or lymphatic fluids—with a morbid activity of the nervous system—*in order to cure*, we endeavour to rouse the nerves to the performance of their due action, and increase the irritability of the sanguinary vessels through the habit.

IN THE PUTRID we find, added to one or other of the states of the vascular or nervous system, a putrescent state of the fluids, either from the absorption of putrid particles, or the generation of them in the habit—*in order to cure*, we attempt to support the vigour of the system, and correct the putrescent acrimony of the fluids, according to the affection of the moving powers---if of the inflammatory kind, by mitigating their too violent action---if of the nervous, by rousing their active powers, so that in due time the offensive matter may be separated from, and thrown out of the mass of fluids, by some of the outlets of the machine; which is the case in all other fevers that deduce their origin from any peccant matter in the habit.

And we may venture to assert, that any practitioner who closely studies, and perfectly understands the nature and management of the four kinds of fevers specified above, will be fully competent to conduct his patient, in the best manner, through every kind of fever, be its nature ever so apparently complicated.

But, besides the fevers we have particularized, there are others, denominated according to their form or mode of progress REMITTENT or INTERMITTENT, though they really are of the nature of those of which we have before treated, either in their separate or conjunct state; and which we must now proceed to explain.

SECTION IX.

CHAPTER I.

REMITTENT FEVER.

FEVERS of this kind receive their name from the mode which they preserve through their progress, steering betwixt those of the continued and the intermittent class; for though the fever does not preserve throughout an equal degree of violence as in the former, there is never a total cessation of febrile affection before its termination, as in the latter. These fevers, therefore, move betwixt the two extremes; having, instead of fresh accessions, as they are called in intermittents, only repeated increase of action, denominated exacerbations; between which a degree of vascular contraction and prostration of strength are continued, indicative of the presence of the febrile cause still in action; and from hence they take their name.

But, indeed, the remissions are sometimes so slight, that they are with difficulty distinguished by the closest attention from continued fevers—though this discrimination is highly necessary, as they yield more in their mode of cure to that we shall find employed in intermittents, being subdued with more certainty by the bark, *judiciously administered*, than by any other application. Indeed, they seem to have so great affinity with the continued and intermittent fever, that they sometimes run into one, sometimes into the other—and the continued, before it becomes intermittent perfectly, will assume the remittent type, so will the intermittent before it changes into a continued.

From some appearances occurring in the course of these fevers, they have been divided into *quotidian*—*tertian*—or *quartan*—according as the remission has happened on the second, third, or fourth day; but in this division there appears to be no practical utility—as it leads not to any particular mode of cure, nor assists in distinguishing the nature of them, whether they verge most to the inflammatory class, which knowledge alone must determine our operations.

DESCRIPTION. They, like other fevers, generally begin with alternate chills and heat, stretching and yawning; and these are succeeded by nausea, vomiting of bile, giddiness, and oppression—then commences the fever, and the heat continues; after these follow pain of the head, back, and limbs—heart-burn—
and

and thirst—difficult breathing—anxiety—inquietude—and, sometimes from the first attack, delirium—the stomach swells now and then—the eyes are generally tinged with a yellow colour, and that diffused over the whole body not unfrequently—the tongue is white and moist—the pulse sometimes hard, seldom full—the bowels are at one time obstructed, at another the reverse.

Thus situated are some periods betwixt the second and eighth day; which time a remission very rarely exceeds; for the most part a gentle sweat will come on, and brings an alleviation of all the febrile symptoms; and this continues for some hours; after which, generally in the evening, the violence of the fever is renewed, sometimes preceded by chillness, sometimes not.

This repetition hath no fixed time for its continuance, in some remaining a longer, in others a shorter space; but at last gives way in its degree of violence, and remits a second time; and thus continues fluctuating till either totally subdued by nature or art—or death closes the scene.

When this last is the case, the patient often dies in the paroxysm, or renewal of the attack—the brain is immediately affected—he loses his senses, and the power of speech—his breathing becomes quick—deglutition is impeded—a looseness comes on—the pulse in the beginning soft, not to be called weak, nor indicative of danger, in a few hours is small and depressed, then cold sweats break out, and the unhappy victim expires.

These fevers have, by some, been stiled *bilious*, from the vomiting of bile, so common in their commencement, and the yellow suffusion on the skin and whites of the eyes; supposing these symptoms to arise from the superabundance of bilious excretion, and the activity of the bile resorbed into the habit, occasioning such febrile commotions—But it is obvious this change of colour is owing to another cause, and *that*, the breaking down of the texture of the blood from the putrescent tendency of the fluids; and thus may the colour more properly be accounted for; because the bile may be returned into the blood, as in the jaundice, without producing these febrile attacks.

In hot countries that are marshy, where the atmosphere is filled from thence with putrid exhalations, they are *endemic*, that is, native and resident—with us, and other parts of Europe, they have been observed to become *epidemic*, that is, occasionally general, towards the latter end of autumn.

CAUSES. The *remote* or *inducing* are said by some, as well as the *proximate*, to be such as bring on a continued, or inflammatory, or a putrid fever, (209, 221.) whilst others attribute *the first* to too great moisture in the air, *the last* to insensible perspiration

ration impeded, and a relaxed state of fibres. However, from the history of these fevers, it is obvious, that they, at different periods, and in different constitutions, put on appearances which are very different, and according to which we are to regulate our conduct. Hence we say, the

CHARACTERISTIC SIGNS are, a remission or abatement, not a total cessation of febrile affections, succeeded by perceptible exacerbations, or increase of febrile violence; which increase is *sometimes* ushered in with chillness;—and if there are strong symptoms of vascular contraction, and great increase of circulatory motion, which are declared by *extreme heat—thirst—and pain*—having a *dry skin, strong, hard, and full pulse*, for their associates, we shall not hesitate to pronounce it **INFLAMMATORY**;—but if attended with *great debility—lowness of spirits—nausea—oppression—vomiting*—coupled with *discolouration of the skin, and languid pulse*, its belonging to the putrid class is indisputable.

This fever is never free from danger; though the nearer it approaches to an intermittent, or the less degree of fever continues during the remission, so much more favourable the omen; but, on the contrary, the more it puts on the appearance of a continued fever, the shorter the remission, and more violent the fever fit, so much the more dangerous. If the urine, which was before of a deep colour, becomes pale, we have great reason for fear—If it changes its remittent for a continued type, the event is doubtful—and when the brain is affected, and the rest of the symptoms, as described (Page 251. line 19, &c.) death is near at hand.

CURE. The indications are similar to what we have delivered on the inflammatory (209) and putrid (221) fevers, adapted to peculiar states agreeing with them, by which this fever may be changed into an intermittent, or totally taken off—consequently, where the inflammatory symptoms are prevalent, bleeding, cooling purges and glysters—vomits—and small doses of antimonials—watery diluting liquids drank plentifully—cooling acescent vegetables—will be the most eligible at the commencement, and will so far answer the purpose in some cases, that nature afterwards may be almost left to herself.

Still, in others, she requires the most immediate and powerful assistance—hence it is necessary to point out the different progressive appearances, by which may be discovered the situation of safety, or danger, and the mode of proper management under each, as, from imprudent conduct, this fever, from its mildest state may be converted into that of extreme peril, and from this last into certain death.

If, therefore, the increase of the febrile affections, a third time, should not be more violent, nor of longer continuance than that which preceded, but nearly similar—if the urine should let fall a laudable sediment, without any visible decrease of strength, or increased dejection of spirits, matters will wear a favourable aspect; and about the fourth or fifth return of the fever, the powers of the constitution will commonly relieve themselves by some critical evacuation, either by the KIDNEYS, SKIN, INTESTINES, SALIVARY SYSTEM, or LUNGS, manifested in *turpid urine, profuse sweat, bilious stools, copious spitting, or expectoration of matter of a yellow cast*—for the fever generally resolves itself in one or more of these ways.

But, on the fifth return, should there appear to be an increase in degrees of severity, in the symptoms becoming more acute and dangerous—if the fit continues longer, and is more violent than before, and there are obviously a sinking and lowness of spirits, with great debility of the powers of the system, we must have recourse to blisters, which some indeed advise at an earlier period, as calculated in a remarkable manner to bring on the intermittent type—and bark as soon as possible in the remission; forty or sixty grains of the powder may be administered every second or third hour—or, if the stomach will not bear this quantity, a smaller dose be given at shorter periods, or the decoction, (193.) hot or cold infusion, (No. 41.) with or without the volatiles or aromatics, as seem necessary; to which also may be occasionally added, the other preparations of this medicine, (193, 194.) by these means many endeavour to stop, or at least retard the progress of the next febrile fit, by throwing into the habit a sufficient quantity—and thus must we proceed till we shall be empowered within twelve or fourteen hours to administer six or eight drams.

If we are not active at this period, and attempt not with all our power to mitigate or conquer the febrile affections, we run the risque of protracting the disease, and rendering it more replete with danger; for now the fits become so quick, and following each other so rapidly, that we are deprived of the opportunity of throwing in the bark in proper quantity, and permitting a continued fever to be the consequence.

But though bark in some states of this fever is so extremely useful, still, in every stage it is not necessary—nay, indeed, in the inflammatory remittents (251.) it is dangerous to administer it, whilst the action of the vessels are too powerful; for from this we might produce the inflammatory continued fever; therefore we must endeavour to lower the system, by those means advised,

(252, line 33.)—that done, the bark may then be advantageously thrown in.

Before we close the account of this fever, we must observe, that though bleeding, and that repeatedly, has been advised in some of these fevers, and with considerable advantage; yet under some circumstances there requires the nicest caution, with respect to the quantity to be taken away, notwithstanding the commencement being ushered in with such symptoms, as might authorise the operation; for bleeding has been allowed to do mischief, especially in hot countries, for there these fevers are generally of the putrid kind—therefore in our first bleedings the quantity should be moderate, seldom exceeding eight ounces—which may be repeated in case the inflammatory symptoms continue violent—but should these only be slight at first, and evacuations are necessary to be promoted, we can only depend upon the gentlest cathartics, such as oil of castor, manna, tartarized kali, Polychrest salt, and tartarized antimony—(See Cathartics, Simple continued, and Inflammatory fevers, where different formulæ will be found) and also the saline mixture—which last often repeated, is said to be the most certain alleviator of the violent nausea and vomiting, which generally attend these cases—or it may be given in its state of fermentation, (No. 59.) and is greatly assidant in correcting the putrid disposition, and those sournesses which are collected in the stomach and flexure of the duodenum—(42.) afterwards the bark must be freely applied. By these means thousands have been saved; and if they are begun with before the strength of the patient is exhausted, and will properly pursue the advice given, seldom any die of this disease.

However in the West Indies in this fever there is something very singular, for it has been observed, that if the bark was not given on the first remission, it was apt to run into the continued species.

There are innumerable varieties of these fevers mentioned by authors, who have given them different names, according to some peculiar circumstances which attended—but all yield to the mode of treatment here pointed out—only in some paying particular attention to any uncommon symptom which occurred—two of which we shall point out.

BILIOUS REMITTENT FEVER.

This attacks generally in the middle of August, and is attended, besides the common symptoms, with violent pain of the head, and often with delirium, which symptoms continue in the night, vanish in the day-time, after sweating, a hæmorrhage or looseness.

ness. In the beginning there is frequent nausea, bilious putrid vomiting, and in the end oppression.

In extreme cold weather, and at the approach of winter, a cough, rheumatic affections, and tenacity of the blood, accompanies these fevers—but it is from the bilious purging and vomiting that it derives its name. If evacuations are not directed, a continued fever with yellowness comes on. The cure is performed by vomits cathartics, acids, and bark; but we must first persist in the use of evacuants before we give the bark, and then it is admirably conducive to promote the cure. This remittent is esteemed of the inflammatory class.

The other we shall mention is of the putrid class.

MARSH REMITTENT FEVER.

This is the bilious, or putrid fever of the low marshy countries described by Sir JOHN PRINGLE.

This fever not only happens in moist, but also in warm countries, according to the season, as they come on in the months of July and August, from putrid vapours arising from corrupted plants or fish.

This bears bleeding very indifferently, and should rather be treated in the evacuating and strengthening method; at the beginning clearing the first passages with gentle emetics and cathartics, and continuing small doses of antimonials—which not succeeding to our wish, bark must be called in to our aid to perform the cure.

In order to prevent the attacks of the remittent fevers, as they are chiefly the children of moist seasons, and low marshy countries, we should keep good fires, with intent to correct the atmospheric humidity—make use of aromatics—avoid the evening and morning air—drink red wine—use exercise and the cold bath—take bark once or twice a day, mixed with bitters—and smoke tobacco—for people who have observed these rules have, many of them, escaped in countries where this fever has raged epidemically, and afflicted numbers who have despised these cautions.



S E C T I O N X.

INTERMITTENT FEVER.

THESE fevers receive their name from the nature of their progress, having a perfect cessation of febrile affections from
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the termination of one fit to the beginning of another, and may be considered as continued fevers of short duration, consisting of many febrile fits, the fever returning at stated periods; for in every fit the course of a continued fever is run through—the coldness and shivering is the beginning—the hot fit the height—and the sweating generally attendant, or at least a gentle perspiration the crisis or termination. What happens in these different stages is thus properly described:

DESCRIPTION. IN THE FIRST STAGE it begins with yawning and stretching, and a certain indescribable sensation in the back and the ends of the fingers; after these succeed excessive coldness, inasmuch, that it occasions violent shaking of the whole body, and chattering of the teeth; still, in fact, the blood is in a state of increased, rather than diminished heat—there are also nausea, and sometimes vomiting attendant, with pains of the back, head, and limbs—the ends of the nose, ears, lips, and cheeks grow pale—the nails livid—the breathing is difficult—the urine pale and limpid—the pulse weak, and extremely quick—and this cold fit continues for one, two, three, four, or five hours sometimes, at others only half an hour before the hot fit commences—which forms the

SECOND STAGE, in which there is extreme degree of heat immediately succeeding the cold, which goes off gradually: in this the pulse becomes full, quick, and strong—the head is painful—and sometimes the patients are delirious—their breathing is forcible and free—the tongue white, attended with great thirst—at the pit of the stomach they complain of much heat, have pain there, and sometimes swelling—the urine is high coloured—and when blood is taken from the arm it is more dense than usual, particularly in spring—sometimes in unwholesome situations and seasons the superior part is red, the inferior black, with a small portion of serum, and that less cohesive than when in health. At the commencement of the

THIRD STAGE there breaks out a general and copious sweat, which alleviates the extreme heat, and mitigates all the symptoms, which, on the sweat continuing for some hours, totally vanishes—the urine deposits a sediment like brick-dust—the patient falls into a sound sleep—and thus the fit closes with a cessation of all the febrile symptoms; and this, called the intermission, in which the patient feels some degree of debility, has much propensity to sweat, and little or no appetite.

It has been thought that we could prognosticate the violence of the hot, by the degrees of the duration of the cold fit, for the longer the latter continued, the more severe would be the former—

mer—but this is erroneous, for the sensation of cold grows weaker in long continued intermittents.

In some countries these fevers are peculiar, as the fens of Cambridgeshire, Lincolnshire, the low parts of Kent, the marshes of Essex, and in places where there is much moisture, and the situation low; and here they generally appear in spring or autumn. They seldom visit other places, except in seasons adapted to their propagation, and then they become epidemic.

They have been divided into vernal and autumnal, endemical and epidemical, and into *quotidian*, where from the termination of one fit to the beginning of another the space of 24 hours is consumed—*tertian*, where that of 48—*quartan*, where of 72—and when longer, erratic. They have also been divided farther; but they seem to be of no practical use, as the modes of cure in all are very similar.

CAUSES. The *remote* or *inducing* are, immoderate evacuations—cold moist atmosphere—irregular or improper diet of crude watery vegetables—lowness of spirits—crudities in the first passages—and, in fine, every thing which contributes to produce a relaxed state of the solids, and poverty of the blood.

The *proximate* or *immediate*, effluvia from moist, marshy places called marsh miasma—impeded perspiration, and relaxation of the solids.

Hence are the poor more subject to this disease than the rich and affluent, those who inhabit the country more than those who live in large towns and populous cities; for generous diet and warmth are preservatives against the disease as well by purifying the air, as invigorating the habit.

CHARACTERISTIC SIGNS. Affections of both the nervous and vascular systems, from marsh effluvia running through the course of a continued fever, of short duration, beginning with cold and shivering, succeeded by great heat, and terminating, for the most part, in profuse sweats, in one fit, which leaves the habit perfectly free from fever for some time, and returns at stated periods.

CURE. The indications are, to prevent the return of the febrile affections, by taking off the too great incitability of the nervous, and irritability of the vascular system, by giving tone or strength to the nerves and vessels, and rendering them incapable of feeling the effect of morbid particles in the habits, called marsh miasmata, and ejecting them out of the constitution.

But at the commencement of fevers we cannot immediately discover of what particular nature they are, and one the least

dangerous may be converted into others which are more hazardous, by injudicious treatment, as an intermittent into a remittent, and this into a continued; we should at the first onset be careful, till we are convinced of its specific nature; therefore to general means we should only have recourse, which may in all fevers be proper, be they of what sort they may, and this will depend on placing the constitution under such circumstances as approach nearer to a state of health.

Therefore, in the beginning, if the pulse give evident signs of fullness, with other concomitant symptoms, which indicate evacuations to be proper, as we have before specified in the remittent and other fevers, blood may be taken from the arm. Should there be nausea or sickness, indicative of foulness of the stomach, an emetic, (No. 11, 12. 38.) should be administered, and the bowels cleared by some gentle aperient medicine. (No. 3. 22 to 24.)

Where these are thought necessary, bleeding and cathartics should precede the administration of the emetic, that no mischief may arise from its operation, which might be the case, should there be any local congestion, or too great general fullness, by rupturing, or distending the vessels too much, or pushing the blood too powerfully into the small capillary tubes, particularly of the head.

If these prove insufficient, we must proceed to the use of antimonials in small doses, united with the saline mixture, or alone, (No. 6 to 9.) as has been before directed—and, as soon as the fever shews what it is, take such steps as its nature demands—if an intermittent, the most powerful medicine, with which observation and experience has furnished us, is the Peruvian bark, (193, 194.)—the quantity given should be generally so much in the interval between the fits as will prevent their return, that is, in adults, from six to eight drams.

The most efficacious mode of administration that has been recommended, is in powder mixed with red wine.

Where the intermission is short, it is given at shorter intervals and vice versa. I always consider what is most agreeable to the patient respecting the form, and give a dose every one, two, three, or four hours, as occasion requires—the nearer the approach of the usual time of accession, the quicker it should be repeated, in order that it may at that time exert its fullest action with its greatest power.

Should the febrile fits be by these means conquered, we must not totally desist from its use, but for a few days repeat it at proper intervals, every fifth or sixth hour; then for a week, twice
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in the twenty-four hours ; afterwards, once for the same, space.

In winter, after desisting for a week, or ten days, it will be prudent to return to it again occasionally for two or three days, and so persist for a few times, which will effectually secure the patient from a relapse. Add to this, the patient should avoid exposing himself to the remote or inducing causes, (257.) use gentle exercise, particularly riding---light nutritious diet---animal food---red port, claret, or any generous wine, in proper quantities---such as are easily digested, will serve to strengthen the solids, and promote a free and regular circulation.

Large draughts of any kind of liquids, however thirsty the patient may be, should not be allowed in the cold fit, as they will load the stomach too much, and increase internal oppression and uneasiness ; but in the hot fit, watery fluids, such as sage, rosemary, balm-tea, small white-wine whey, and such like, may be liberally administered.

The forms in which the bark is administered, are either in bolus, pills, electuary, decoction, infusion with cold or hot water, simple powder, tincture, or extract. (See the doses, 193, 194.)

When we want to throw in as much as possible in a given time, (see No. 70.) and let it be administered every second, third, or fourth hour, according to the times of the febrile accessions. (258.)

Where bark has disagreed, equal portions of quassia wood and snake-root, infused in boiling water, or oak bark in powder, or extract alone, joined with alum, or chamomile flowers, have been efficacious, given during the intermissions every three or four hours, (No. 71, 72.)---the virtues also of cupulæ, or scaly cup, which embraces the bottom of the acorn, are similar, in a considerable degree, to the oak bark.

The method above laid down will generally be successful in the quotidian and tertian intermittents, (257.) particularly if we couple such medicines along with the bark as the nature of the constitution of the patient, and the apparent febrile symptoms indicate, viz. if the habit appears robust, the pulse, in the febrile fit, full, hard, and quick, with other inflammatory symptoms, bleeding has been greatly beneficial ; and in these cases, joining the bark with saline substances, as tartarized kali neutralized with lemon juice, (No. 1.) and the decoction of bark, or fixed sal ammoniac, (176.)---if contrary appearances, cordials and volatiles have supplied their places, as volatile salt of hartshorn, (150.) tincture of snake-root. (179.)

Notwithstanding which, they will sometimes prove very obstinate---in these cases vomits (No. 11, 12. 38.) given a small space of time before the return of the fit, and antimonials in small doses, (230.) pursued through the course of the hot fit, have been found beneficial---or, where the habit has been in a highly irritable state, opium, (152.) administered before the fit, or in the hot stage, seemed of use.

It is only though in the quartan (257.) intermittent that they are often required, seldom in the others preceding, notwithstanding the hot and cold fits continue a shorter time than the two former, the whole fit seldom lasting above five hours.

Bark seldom fails of completing a cure, if judiciously administered, and the concomitant circumstances which sometimes appear, are properly attended to---when it does, the failure is owing to some of the following particulars---either it has been given in too small doses---not persisted in long enough---given in an improper form---or such medicines may not have been added to it, nor such a regimen observed, as the peculiar nature of the case required.

Sometimes the bark has a tendency to pass off through the bowels, then it is necessary to add a few drops of tincture of opium to each dose, which will prevent that effect---at others the habit will be too costive, eight or ten grains of rhubarb may be given soon after the cessation of the fit, to obviate that inconvenience---sometimes the stomach will not bear it, it may then be administered in form of glyster, (No. 73.)

It is sometimes extremely difficult, and very often impossible, to get children to take a sufficient quantity of this medicine to answer the desired purpose---for the best form to which they will adhere the longest, (See No. 74.)

But they have been cured by baths, in which half their body has been immersed, of bark decoction, rubbing the spine with equal parts of soap liniment and tincture of opium---or wearing a waistcoat made of callico doubled, within which bark has been quilted.

With respect to our prognostics in this disease, when eruptions appear upon the lips, they afford a good omen; and the more regularly the fever passes through its stages, so much the better. Epidemic fevers of this kind are worse than those which occur accidentally to a few---quartans than quotidians or tertians---autumnal, than vernal---Inflammation of the tonsils is considered as mortal---sometimes it carries off those who are very infirm in the first stage---they frequently leave the constitution extremely weak, so that it requires a long time for the re-establishment of perfect health; which must be assisted by proper regimen, and exer-

exercise, as has before been specified, after the termination of other severe fevers---sometimes they terminate in jaundice, consumptions, and dropsies, which, if they arise from scirrhoties, or hard irrefoluble tumours of the viscera, are fatal.

But, notwithstanding what may be thought, with respect to the necessity of an early cure, it is not always proper to take off this fever immediately—for by their continuance, they have been known to cure epilepsy, severe coughs from affections of the liver; also hypochondriac and gouty affections have disappeared, by this fever bringing about, from its continuance, some salutary constitutional changes—the bleeding piles, small-pox, and other acute fevers, as well as strong mental affections, have been known, on the other hand, to subdue the ague.

SECTION XI.

HECTIC FEVER, OR

CHRONIC REMITTENT FEVER WITHOUT CRISIS.

THUS would I wish to denominate this fever, because the word **HECTIC**, except from long continued custom alone, gives us no determinate idea respecting it; and where any complaint is peculiarly marked by any known cause or symptoms, by which it deviates from all others of the same class, and by which from them it may be distinguished, can be confined in a very short compass, by terms expressive of that peculiarity would I have it marked down. As, therefore, hectic fever is of longer duration than any other remittent fever, goes off, when curable, by no known crisis, and, during the whole course, has various exacerbations and remissions, I have ventured to alter its appellation.

Authors have been much divided with respect to this fever, *some* considering it *always* symptomatic, deriving its source from some local complaint, and depending entirely on that—others, that it may also be a primary disease, neither arising from, nor dependent on any other—for the latter opinion I confess myself an advocate; for, though hectic symptoms certainly do derive their source from scirrhus obstructions and ulcerations of all the viscera, more particularly of the lungs (28.) and mesentery, (46.) because it is said the former are exposed to injuries from the external air, and the force of the blood circulating through
their

their substance; the latter is subject to the same from compression of the aliments in the first passages, from viscid chyle, (43.) and the slower circulation of the blood through the intestines; still may they arise immediately from some acrimony of the blood, because they have occurred certainly where no one viscus, through the whole course of the disease, was affected more than the rest; nor do the visceral obstructions, which are always found on dissection, destroy the validity of this opinion; for they are the effects, as well as causes, of hectic fevers—of which we shall be convinced, if we will only examine the remote or inducing causes, which we shall shortly specify.

DESCRIPTION. The symptoms are very similar to what appear in consumption of the lungs—the patients labouring under this complaint have a continued, dry, unnatural heat; they lose their appetite, and their pulse is small, weak, and frequent, though fuller and stronger after eating; they have no sensation of sickness; after meals a flushing of the cheeks comes on; and their urine is in general red, and covered with an oily pellicle; their sleep by no means refreshes them; they become hollow-eyed; their skin grows harsh, the belly sinks inwards; a colliquative looseness comes on, the body grows tabid, and death makes its approach by slow degrees.

On this fever the sagacious Dr. Heberden has made several useful remarks in the London Medical Transactions, Vol. II. page 1, &c. amongst which he says, “the most certain mark of this fever is, when the sweat, which usually attends this fever, is over; the fever will sometimes continue, and in the middle the chilliness will return.”

This is very readily distinguished from all other fevers by the slowness of its progress—but from the first stage of the watery head, with great difficulty, and not without the most assiduous attention to the symptoms peculiar to each.

CAUSES. *Remote or inducing* are, immoderate and long continued mental affections—long watchings—too great evacuations, whether of blood, milk, semen, saliva, pus, sweat, or the alvine fluids—too acrid medicines, as mercurial preparations, strong purges, too often repeated—debility of the first passages, by which the chyle, either crude or corrupted, is conveyed into the circulating mass of fluids—preceding diseases, as intermittents, small pox, measles, dropsy, scurvy, king's evil so called—suppressed evacuations—frequent intoxication—old people and infants are also subject to it, from their age alone, dependent upon constitutional debility.

The *proximate or immediate*, both from the preceding causes, and the modes of cure, are said to be, a saline and acalescent state

state of the fluids---whether this may be the precise case, perhaps it may be difficult to determine---though mucilaginous materials and acids are said to be beneficial, yet it is highly probable some species of acrimony takes place in the habit, as the fundamental principle of this disease.

CHARACTERISTIC SIGNS. Febrile affections long continued, having frequent increase of violence, no perceptible intermission, and not terminating in crisis, attended with irregular vascular action increasing often in the day, more so in the evening; and generally at the beginning with tenacity, towards the termination, with putrescency of the blood.

CURE. The indications are, to mitigate febrile affections, and correct the acrimony of the fluids.

If care is taken of this complaint at an early period; and proper advice administered, a cure may be effected---but, under these circumstances, patients often delay too long, and confide either in their own imaginary knowledge, or the family receipts of some humane old woman, till little chance remains for the skill of the more judicious; for when the powers of the constitution become to be greatly debilitated---the hair falls off---a colliquative dissolving looseness, night sweats, and swellings of the legs come on---the urine begins to have an oily appearance, and the countenance assumes a cadaverous aspect, becoming thin and ghastly, all prospect of warding off the fatal blow is irrecoverably gone, the patient is got beyond the reach of our art, and death quickly closes the fatal scene.

In the beginning, where we can be of service, we must first of all clear *the stomach and bowels* by gentle emetics, (No. 11, 12.) and mild aperients, chiefly rhubarb---*abate the febrile heat* by small doses of Polychrest salt, (171.) and nitre, (177.) and giving such doses of oil of castor, manna, or some such like cooling and gently opening medicines, as will keep the body free from costiveness, (171, 172.)---*in order to sheath the acrimony of the fluids*, we must have recourse to demulcents, (187.) emollients, (137.) and particularly, which will be more effectual, to a well-regulated diet and regimen.

The food should consist of chicken broth, jellies, and if the stomach will bear them, oysters---milk, particularly women's or ass's--goat's whey--buttermilk, with Bristol or Seltzer water. The patient should live in a clear country air, on a dry soil; keep cheerful company; ride constantly on horseback, or travel from place to place---or he should take a voyage to sea, or sail every day, for that has been known to save numbers in the beginning of this disease, and some who were rather advanced; but to all it affords great relief. And at the same time, with intent to keep
up

up the tone of the system, mild astringents, slight infusions of bark, one ounce and an half, with ten drops of dilute vitriolic acid may be given twice a day, or two or three ounces of tincture of roses also; three or four drams of the conserve may be mixed with six or eight ounces of milk, and taken two or three times, or oftener, in the day;---as for common drink, they should use barley-water, decoction of marsh-mallows, linseed-tea, or that of colts-foot. Bristol water has been esteemed highly serviceable; but it is often deferred too late. In the earliest stages of this disease it should be applied to, for in them it promises to be of the most essential service, little, as we have before remarked, being capable of being done in the more advanced or latter periods.



S E C T I O N XII.

ERUPTIVE FEVERS.

SO called from the Latin word *crumpo*, to break out, and also in medical language EXANTHEMATOUS, from the Greek word *exanthema*, pustula, a pustule, because these eruptions make their appearance on the surface of the skin---and this is done by the effort of nature to throw out some matter offensive to the constitution, which was creative of disease.

Now though these partake of the nature of some of those we have mentioned in Section 8th, still they derive their names from the eruptions with which they are constantly accompanied, and of these there are several species and varieties---of which we shall treat separately, because they require different modes of management, according to the different effects they produce upon the constitution.

And these effects will be assisted or alleviated, by attending more to the habit of the patient than to the specific nature of the morbid particles which produce them; for we know nothing of the materials, or the parts of which they are formed, consequently cannot be able to find out any specific remedy which can correct them, so that the disease, of which they are the source, may be subdued, by weakening or destroying the power inherent in themselves.

Therefore, in all our medical exertions, we attempt only to prevent the ill consequences they are likely to produce, by safeguarding the constitution, that nature may be empowered to separate

parate and throw out what would, if suffered to remain, prove fatal to the human machine, either producing immediate death, or bringing on other maladies which would in time have a similar termination.

Now all these fevers of which we are going to treat are esteemed infectious, consequently contagious; for these two terms are used synonymously by the most learned authorities. Notwithstanding which, I would endeavour to make some discrimination between them, and am warranted in the attempt, if any the least benefit can be derived to society by the observance of such a distinction; to prove which, I assert, that there are some diseases which are acquired by the particles of morbid matter floating in the circumambient atmosphere, either from that matter being inhaled by the lungs, impregnating what we eat or drink; or absorbed by the inhaling vessels of the skin, nose, or fauces, whilst others are communicated from contact alone—hence the former of these I would term *infectious*, the latter *contagious*; and for this reason the modes of prevention would be different—for in a country or town where the first was rife, quitting those places is absolutely necessary; but where the last, cautious residence in the same is sufficient, avoiding commerce with persons so contaminated; or touching any materials, which are capable of retaining the contagious matter, that have by them been used or handled. Besides, in this county, it shews, in cases of the plague, the security in drawing lines of circumvallation to prevent its progress; indeed other modes, from this idea, might be found out of great utility under these unhappy circumstances. Supported by these reasons, I shall beg leave to preserve the difference between the two terms, and proceed to treat on eruptive fevers from infection; and, first, on the

§ I. SMALL-POX, or POCKS.

Because we call a single pustule *pock*—this seems to be derived from the Saxon word *pocca*, pocket, or the French *poche*, a small bag. The Latins gave the disease the term *variola*, because from the eruptions it altered the appearance of the skin.

This complaint is occasioned by morbid matter of a peculiar nature absorbed into the habit from the external air, from contact of a person infected, or from inoculation, either by the inhaling vessels of the skin, lungs, membranes of the nose and mouth, or first passages—and has been divided agreeable to the cuticular appearances, into distinct, confluent, coherent—or into common, *crystalline* eruptions full of thin serous matter—*verru-*

cous, resembling warts—or *bloody*, filled with red fluid, or blood in a broken state.

However generally now we adhere to the terms *distinct* and *confluent*; but this seems of little use in practice; for they may be distinct, yet of a very bad kind; and confluent, yet very good; therefore the more eligible division appears to be into *simple* and *malignant*—the first comprehending those which are the least, the last, those which are the most dangerous.

This disease has four stages: the first, the *febrile*, which continues three days—2d, the *eruptive*, two days—3d, the *suppurative*, five or seven—4th, the *exsiccative*, or stage in which the pustules dry, two or four days—or sometimes another fever comes on, called the *secondary*.

DESCRIPTION. It generally commences with symptoms of an inflammatory fever, from whence the particles of the morbid virus are considered not only highly subtilized, but inflammatory and stimulant, attended with nausea or vomiting—pain in the head and back—tightness about the pit of the stomach—the patients are very drowsy, sometimes delirious—in grown people often sweats break out on the first days, and infants are apt to be seized with convulsions—the skin though, in general, is rather moist and soft—the upper orifice of the stomach sometimes acutely painful, and also the sides.

These symptoms continue three or four days, on which appear small red specks like flea-bites; which, when pressed with the finger, may be felt hard in the skin, and thus may be distinguished from other eruptions, particularly the measles, which, on their first appearance, are very seldom so hard, or can be felt in this manner, as not elevating the cuticle so much; first on the face, and scattered on the hands, neck, and breast; and with these commences *the second stage*; from which period the pustules keep continually increasing, and diffusing themselves over every part of the body; at which time the fever goes off when the eruption is completed; after this they inflame, begin to be prominent above the skin, are painful, hot, and fill about the fifth day; and have round their basis a circular florid redness—the throat also is painful, and inflamed commonly—the face begins to swell and puff up, for the most part, on the seventh day, so much, that they generally close the eyes, and occasion blindness.

At this period, the commencement of *the third stage*, as if from external irritation, soliciting the perfect and complete discharge of morbid matter, fresh febrile symptoms arise, which continue to the ninth, tenth, or eleventh day, according to the severity of the disease, or quantity of the eruption. The pustules having acquired their full size, most of them as big as pease, are filled
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with a whitish or yellowish matter ; this concludes the third stage ; and then the matter oozes out at the top of the eruptions, dries, turns of a dark colour, and forms hard scabs, and this is in the same order in which they made their appearance—and, as the face subsides, the feet and hands swell, and subside not totally till the fourteenth day, at which period the disease is considered to have completely finished its course, which forms the conclusion of the fourth stage.

This is in general the progress of the simple or mild species—though sometimes another fever, called SECONDARY, will come on, when the eruptions have run so together, that they form one uniform crust, and by that means obstruct perspiration ; so that, instead of the quantity of variolous matter passing out of the habit, it is again re-absorbed, and the intestines are loaded with an offensive collection of acrid materials, which create a fever of the remittent class that often proves fatal.

But in the confluent sort there are some peculiarities which ought to be specified ; and, therefore, we must observe, that in these the pustules break out sooner, on the second or third day ; the febrile symptoms run on with a greater degree of violence—and on the appearance of the eruptions, or a day or two after, which happens now and then in the distinct sort a *spitting* will come on, gradually increasing to a salivation in grown people—in infants a *looseness* supplies the place—though in common the attendant fever of the small-pox is of the inflammatory kind, yet, in the more complicated sort, the fever assumes a different type, and puts on the appearance either of—1st, an *inflammatory remittent*—2dly, *nervous*—3dly, *putrid fever*—or is associated, 4thly, with *symptoms of dysentery*.

IN THE FIRST, the febrile affections run very high, with excessive heat, and great prostration of strength—the skin is dry and hot—the arteries, called carotids, running through the neck into the superior parts, throb—the tendons, (22.) grow stiff—the eyes are bright, vivid, and full of blood—the head and loins are painful, often without any delirium or drowsy disposition—when the eruption is finished, if the patient dies not before the completion, which, from the violence of the fever, is sometimes the case, the head-ach, pain in the loins, vomiting, and other symptoms, are relieved ; but the fever revives its former force, or continues, and has increase of febrile affections every thirty-six hours—hence termed *tertian* ;—at this period there arise want of sleep, delirium, anxiety—there also come on bleeding of the nose, copious sweats—then heat, and dryness of the skin—very often miliary eruptions break out in spaces between the pustules, or small purple spots like flea-bit—sometimes an erysipelatous in-

inflammation will occupy the head and face, and occasion a large inflammatory swelling—the febrile and other symptoms increase in the suppurating state, with tossing and delirium—the pustules subdue not, nor seem to be of a very bad sort—sometimes though they grow black and mortify—then the patients lie in a state of aparent sleep, and convulsions close the scene.

IN THE SECOND, at the commencement, there is great prostration of strength, lowness of spirits, obscure febrile symptoms, extreme nausea, sickness, and oppression.

The pustules never push forth perfectly, nor mature kindly, but many lurk in the skin; and those which elevate themselves a little above it, are flat and depressed, containing a thin aqueous fluid, and have a small black spot in the middle—the face, when the eruption is copious and runs together, never swells, but looks as if covered with a yellowish skin, something like a macerated bladder of that colour.

A thin serous looseness generally comes on—if not, convulsions put a period to the unfortunate patient's existence.

IN THE THIRD, the symptoms preceding the eruptions are nearly similar to the former; but the pustules are black; the bottoms of which are in a mortified state; indeed, the texture of the blood is so broken by the putrescent acrimony, that it runs off by urine, and various other hæmorrhages; the spaces between the pustules are black, and large broad spots, called vibices, or small ones, like flea-bites, are formed on the skin; besides, the red portion of the blood not only mixes with the serum, and fills the eruption, but it raises large blisters elsewhere.

These pustules, which are only a little elevated, beginning to appear upon the second day, are black; the urine, for the most part, is bloody; as are also the stools, spittings, vomitings, and in some even the tears; the fever is violent, and the febrile fits almost insupportable.

IN THE FOURTH, which was called DYSENTERIC, because it happened in the year 1670, at the time of the epidemic dysentery, and partook, in some degree, of its nature; or, because the matter of the small-pox was often thrown out of the constitution by intestinal evacuation, when treated by the warm regimen, not uncommon in those days,

In this the eruption does not occur, as in the mild sort, on the fourth, but on the third day; the pustules are of a less size always, and are sharper, or more pointed at the top, and grow blackish towards the conclusion—besides, a copious discharge of saliva, as in the confluent kind, is often a concomitant. Should the acrimony of the putrid, which produces the alvine flux, that forms

forms the characteristic sign of this species of small-pox, be very copious and active, occasioning the discharge to be violent, it almost always proves mortal.

CAUSES. The *remote* or *inducing* of this, as well as of every other species of infectious or contagious fever, is a predisposition, or peculiarity of the constitution to feel the impressions made by the morbid matter, productive of distress in the moving solids, and alteration of the fluids of the machine.

The *proximate* or *immediate*, contaminating particles, peculiar to the small-pox, absorbed into the habits, and these producing febrile effects, which vary according to the nature, or particular state of the constitution at that time.

CHARACTERISTIC SIGNS. The only certain ones are the eruptions themselves, with their progressive concomitant symptoms, the appearance of which may be suspected in the first stage, if the attack should be sudden—if the small-pox should be the reigning epidemic, or the patient so situated, that he has been thrown in the way of this specific infection—if pain should affect the back part of the head, fauces, loins, particularly the pit of the stomach, attended with vomiting, and that pain increased on pressure.

CURE. The indications are, to diminish the assimilating or contaminating power of the morbid matter, and keep the fever within such bounds, that nature shall be enabled to separate from and throw out of the habit the offensive materials that cause the distress, which is done by so regulating the motions of the nervous and vascular systems, that the constitution may be put into a state to mitigate and support the succeeding contest with the greatest ease, and freedom from danger.

And this knowledge we shall acquire, by considering the situation of the habit, the mode of living, and season of the year, with respect to the weather or constitution of the air, as these will dispose more or less to the production of inflammatory, nervous, or putrescent febrile affections; for I am certain, that, according to the nature of the fever, so are we to regulate our conduct, and hence observe those rules which have been previously laid down in the management of those different fevers specified in our eighth and ninth sections.

Sometimes the disease is so extremely mild, that there is no need of medical assistance, though at the close, in order to clear the first passages from any foulness or offensive matter which may have been collected there during the progress of the complaint, it would be right to give two or three purges. (No. 3. 19 to 24.)

At others, it is of a very dangerous nature, and requires the
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assistance and sagacity of no small share of medical knowledge, as it is accompanied with such a variety of threatening symptoms.

Should the small-pox attack strong, hale, robust habits, where inflammatory symptoms run high, which they sometimes do to such a degree, as to affect the brain, throat, or lungs, so as to produce delirium, suffocation, and extreme difficulty of breathing; according to the violence of the symptoms we must have recourse to bleeding, and that repeated, if they give not way to the first operation—indeed, if the pulse is hard and full; the heat considerably above the natural standard; the urine high-coloured; the pain in the head, back, and loins acute; the bleeding at the beginning should be copious—and, under these circumstances, blood may be taken even at the height, or any intermediate stage—we may also give antimonials, nitrous and cooling medicines, and such other things as have been advised in cure of inflammatory fevers, (210, &c.) for the same reasons.

If the head should be violently affected, the feet may be bathed in warm water, and warm fomentations, or poultices, applied to them; for these will solicit a freer circulation downwards, a more copious eruption into the extremities, and diminish the quantity of variolous matter, which otherwise would appear in the more superior parts.

After once or twice bleeding, a gentle emetic, (No. 11, 12, 38.) would be useful, and clearing the first passages with some mild aperient, (No. 3, 22 to 24.) or at least repeated glysters every, or every other day, (No. 25, 26.)

By the means above directed, we reduce the active power of the system, that it may not be hindered from throwing off the matter of the small-pox, by the too great disturbance and distress occasioned by the rapidity and violence of febrile action.

But should the train of symptoms be such as indicate the presence of a *nervous fever*, (225.) we must endeavour to rouse the vascular motions, and increase the activity of the nervous system, in the manner we have directed in nervous fever, (216.) for, without this, there will only be a partial separation of the variolous matter thrown out upon the surface of the body; and the internal parts, such as the brain, stomach, lungs, and bowels, be more loaded, and the fluids not perfectly free from morbid particles. To obviate these inconveniencies, we must *not* do any thing that is likely to turn the humours upon the bowels, nor take away any blood; for these would weaken the system, already in too debilitated a state, and render the fluids too acrimonious; we must try to invigorate the constitution, in order that
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the blood may circulate with proper freedom externally, by wine, wine-whey, volatiles, and cordials, (218.)

The load, nausea, anxiety, and oppression, which are almost always constant concomitants in this species of febrile affection, might be relieved by an emetic. (247.) for the shock would tend in some degree to rouse the system, and promote the eruption by that means.

Should the fever attendant be of the *putrid kind*, and betray symptoms of prevalent putrescency in the humours, we must not have recourse to the lancet; for bleeding would hurry the constitution rapidly into all those mischiefs which arise from extreme debilitated nervous action, and broken texture of the blood, as before explained when treating on putrid fever, (223.)—here we must depend upon bark, and such things as were specified when treating on that malady.

In order to promote success in treating this complaint, in the best manner we can, by procuring a separation and expulsion of the morbid matter, we must, indisputably, pay attention to the precise nature of the fever; for it is by properly regulating that from whence we can hope for perfect and lasting relief.

Particular occurrences present themselves frequently, which call for our attention in an especial manner, added to the general plans we have specifically pointed out, in which we must attempt to imitate nature in her operations.

When insensible perspiration is too much impeded by the pustules crowding so close together, and obstructing the pores of the skin, she produces either a copious spitting, free discharge of urine, or looseness, to make up that defect, or lodges the aqueous fluid in some part of the cellular membrane (26.) of the hands and feet, which at that time put on dropical appearances—hence is pointed out to us the necessity of serous evacuations.

It is therefore incumbent upon us to endeavour to promote the flow of urine from the completion of the eruption to the turn, by the use of diuretics; the safest of which is æthereal spirits of nitre, (176.) and taking the patients now and then out of bed, and exposing them to the cool air.

Small doses of calomel, under these circumstances, have been attended with some success, as they often promote a spitting, or increase the discharge of urine; or, should we be afraid of determining the humours too much to the bowels, it may be thrown into the habit in form of ointment, rubbed in above the knee, or on the inside of the thighs.

But if these discharges are defective, or cease altogether, and there is no swelling in the extremities sufficient to counterbalance the decreased or obstructed evacuations, the ankles or wrists must be

be blistered, by insinuating some blistering ointment into the spaces between the pustules—and if this succeeds, by creating a free discharge, the danger which before threatened may be happily prevented—if not, we shall have reason to fear a fatal conclusion.

Sometimes restlessness will be occasioned, and the febrile symptoms increased, by irritation on the surface of the body, creating pain, as the pustules proceed to perfect maturation and dryness—here opiates (151.) (No. 4, 5.) procure ease and sleep, forward suppuration, expedite separation and expulsion, by preventing internal disturbance in the system from the causes above specified. But, perhaps, by their use the body may be rendered costive; or if so, at this period, from any other cause, gentle aperient medicines have been recommended; but glysters, (No. 25, 26.) every day till the dryness of the pocks takes place, are more eligible, as from them there can be no danger of creating the smallest disturbance in the habit, nor of determining the fluids too much to the intestines, so as to run the least risque of inducing a looseness; and they will also effectually assist in preventing an increase of febrile distress, which might arise from collections of acrimonious matters in the first passages.

Sometimes after the incrustation is perfectly formed, from the resorption of pus, offensive acrid matters in the first passages, or the absorption of acrimonious or fetid particles from foul linen, the secondary fever is apt to arise. In order to prevent which, the patient should have his linen changed, be put into fresh sheets well aired, every thing be removed from him which can be supposed to harbour offensive matter, and a purge, (169, &c.) (No. 19 to 22.) given as soon as the crust is actually formed.

Though some conjectured, with equal if not with more probability, that this fever arises from the imperfect separation or expulsion of the variolous matter, and that it becomes the instrument of nature to free the habit from what remains.

However, be the case which it may, if it runs high, and is attended with violent head-ach, great oppression, and difficulty of breathing, bleeding may be necessary, and so long as the pulse can support the operation well, it may be repeated—blisters should afterwards be applied—and purgatives administered, if the pulse does not flag—and vegetable acids should be mixed with common drinks—but should the strength fail, we must have recourse to cordials.

If it goes not off by these means, it will, in all probability, put on the appearance of a remittent fever, and as such must be considered—for the subduction of which, we must, as in cases of those

those fevers before specified, (252.) apply to the bark, (253) and with respect to the quantity to be applied, the age of the patient, and violence of the disease, must regulate our judgment.

Some, in order to mitigate or prevent this fever, have advised the pustules, as soon as they are fully matured, where they are of the confluent kind, to be opened as they ripen, in the order they make their appearance. I am, however, far at present from recommending the adoption of such a plan, as I should be fearful of the most dangerous consequences ensuing from such a practice, particularly where the fever, after the eruption, still continued with any degree of force; for it is very probable that, from thence, there is not a due separation of the morbid materials, and that the *secondary fever* is very often, at least, *an effort of nature* to throw what remains out of the habit—and that by the irritation on the skin this purpose might better be effected, than by its being taken off; for from such attempts, there has been reason to believe death the consequence. Much mischief has accrued from applications made to gouty limbs, from the impetuosity of the sufferers to take off the pain arising from that cause, before the whole of the gouty matter had been deposited; and in these two cases the reasoning is nearly similar, as well as some others; and it is well known, that nature frequently makes pain arising from some irritating power the sole cause of constitutional relief. I would therefore advise great circumspection on the present point, which only can be warranted by practical certainty, not whimsical, though ingenious, conjecture.

Sometimes the small-pox will be attended with a remittent fever, (250, &c.) verging to the inflammatory class; then the disease must be treated in the same manner as we have delivered when treating on that fever. (210.) (See 252.)

Sometimes the eruptions will put on different appearances, (265.) which from thence are called CRYSTALLINE, and be attended with a nervous fever; in this case therefore, we chiefly depend on blisters and vinous cordials, with such other aids as we have specified in the treatment of the slow nervous fever. (216.) Or SANGUINEOUS or BLOODY, and have for their concomitant a putrid fever; in which case, without some service can be done in the beginning, not one ray of hope remains for our success—for which purpose we must depend upon bark, and such other antiseptics, (192.) as are supposed to have the most powerful and immediate action, the principal of which is alum, (137, &c.) (No. 56.) and pursue the mode of management throughout, as recommended in the putrid fever. (223.)

Or, they are attended with extreme pain, and violent flux from the bowels, putting on the appearance of dysentery, (268.)

—in this case we must endeavour to retard the flux, by some gentle cordial antacids, of the shell or earthy kind, (191.) called absorbents, (No. 42, 43.) or the white decoction, with red port or claret, or astringent draughts. (No. 75, 76.)

But in this complaint much nicety is required—for alvine fluxes are not always to be considered morbid, they are sometimes critical, and the means of which nature makes use to carry morbid virus out of the habit—if, therefore, the pulse does not sink, but continues to move with strength and greater freedom, and the oppressive symptoms are all alleviated, the use of astringents should be cautiously administered. It would be more advisable, to support the patient by mild cordials, and exhibit such medicines as would sheath the bowels, and suffer the matter to pass through them with the least uneasiness—small doses of ipecacuanha (No. 57.) will be beneficial, and preparations from the class of the demulcents, as mixtures of gum tragacanth, Arabic, starch, and such like; and, towards the conclusion, opiates, joined with some of the mild astringents, might be used. (No. 77, 78.)

With regard to the diet, it is always to be adapted to the nature of the fever, during its continuance, which may be collected from what has been said on this head, when treating of the inflammatory, nervous, and putrid fevers. The apartments must be kept cool, and the patients sit up some hours every day, if the circumstances of their case will permit—and after the complaint has finished its course, purgatives should, at proper intervals, be repeated, to clear the habit of any remains of morbid particles; and the same course pursued for the recovery of the strength, as after the conclusion of other fevers, where the constitution has been much harrassed.

Long experience have enabled practitioners to make the following observations respecting the good and bad omens in this disease:

The later the small-pox make their appearance in winter the less dangerous they will be—they are also more mild in the young subject than the strong adult—the longer the first, or febrile stage, continues before the eruption, so much more mild; the shorter, so much the more violent may we expect the disease to be—should there be an acute pain in the side, or in the upper orifice of the stomach, they are bad signs—the more the pustules crowd together, the more numerous they are in the face and trunk of the body; the more flat or depressed, the slighter the remission in the second, or eruptive stage, so much greater will be the danger—a delirium succeeding the eruption imports no little mischief—deficiency of the salivary discharge, in the depressed or confluent sort, is one of the worst symptoms—the more florid the spaces between the pustules

tules are, the greater may be our hope; *paleness* there affords us no flattering prospect.

If the *matter in the pustules be white, viscid, and full*, it is a fortunate appearance; but if, on the contrary, it should be *brown and thin, and the pustules grow yellow, or have their tops indented*, it is the reverse—if the *spaces between the pustules, and they themselves*, are livid, death is at hand.

It is also a bad omen *if the secondary fever appears before the retrocession of the pustules—if the face subsides, and the salivation or spitting ceases, and the hands and arms swell not in the same proportion*, in the confluent sort, it is a sign of death.

If, on account of being too heated, *the patient cannot bear the bed-cloaths upon him*, it portends a delirium—*great inflammation of the fauces, quickness in breathing, clear urine, with little cloudiness floating in it, grinding of the teeth, picking of the flocks from the bed cloaths*, threaten dissolution—nor are we to build any hopes on the remission of delirium, *if the fever continues in the same state*.

Before we close this part of our subject, we must beg leave to make one general observation respecting all eruptive fevers, as well as the small-pox—that as many, though their eruptions arise from the consequence of their peculiar action on the constitution, and produce specific cuticular appearances, are ushered in by some fever, either of the inflammatory, nervous, or putrid kind, in general; yet, should they be attended, as sometimes they are, with those of the mixed class, where we cannot perfectly distinguish to which of the more simple sort they belong, we must treat them according to the ideas given in the mixed fevers. (240, &c.)

§ 2. INOCULATED SMALL-POX.

It is rather singular, that after so many years experience of the advantages accruing from inoculation, that there remain any so blinded to their own interest and happiness, as to be desirous still of abrogating the practice—which is the preserver of life, beauty, and health, so perfectly clear to common observation.

The mere recital of the benefits annexed to it are so conspicuous, that reasoning is unnecessary.

It supplies us with the opportunity of having the body properly prepared for the reception of the morbid matter; so that it may be freed from such materials as would supply an active cause to increase and prolong febrile affections; and thus prevent the fever, which always attends in the small-pox, from running too high, or producing otherwise dangerous effects, according

to the nature of the constitution—it occasions a smaller quantity of eruptions, and the pustules to be more superficial—hence not leaving those deep pits, and often unseemly scars as in the natural small-pox—it supplies us with a knowledge of the disease at the first onset, and enables us to provide against its consequences—it empowers us to throw in the matter into the constitution from places far distant from the vital parts, and prevents the lungs being primarily affected—and, what is of great consequence, it enables patients to escape the secondary fever, so fatal to numbers; for in this artificial sort it rarely attends—add to this, the operation is so extremely trifling, that it is performed almost without the slightest pain, in the following manner:

The scarf-skin, of one or both arms, is elevated by a lancet, upon which some of the infectious matter, taken from a patient labouring under the small-pox, remains, then pressing the scarf-skin upon the lancet, and with drawing it from under that pressure, the variolous matter is left upon the true skin, and taken into the habit by the absorbent inhaling vessels, which open upon its surface.

Subjects of every age may be inoculated, even such as are at the breast; by some esteemed the best time of life; but it should be before they begin to cut their teeth—certainly their constitutions are at that time in the most proper state—and, could we be assured that no accident would occur that might need the aid of medicine, there could not be a moment's hesitation respecting the preference; but, on this account, I shall rather recommend inoculating at two years old, when complaints could not arise from teething when the constitution was not in so irritable a state as to be inconvenienced by slight causes—and, in cases of necessity, should they arise, the application of medicines would be less resisted.

With regard to the season, practitioners have differed in that point—the hot months in summer I consider as the most exceptionable, and give the preference to those which are the most temperate—the spring, or latter part of autumn, taking care, during these periods, to avoid performing the operation when inflammatory or putrid fevers or other acute complaints were epidemic, for very obvious reasons.

The modes of preparation should be adapted to the constitution of the patient.

Generally living cool and temperate for three weeks, feeding on acescent food, with now and then a gentle mercurial purgative, for those of healthful habits, will in common be sufficient—but those of puny constitutions, whose system is relaxed, should live more freely, and be allowed animal food once every day, of
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the light and easily digestible kind, and in moderate quantity, mixed with acescent vegetables.

In fine, preserving the constitution in a moderate degree of strength, clearing the first passages, removing glandular obstructions, making that system act with freedom, and loading the machine, as much as may be, with acescent fluids, seems the most rational mode of putting the body into the best state.

By these means, the nervous and vascular system will be enabled to perform their functions properly, and the humours not become prone to run into an acrimonious or putrescent state—hence nature will not meet with any impediment to prevent her from separating and throwing out the offensive matter, after it has produced its effects on the mass of circulating fluids.

It has been thought, and I am of opinion, rightly, that it is immaterial from what sort of small-pox the inoculating matter is taken, as the different kinds produced depend not upon the nature of the morbid particles, but the constitution into which it is thrown—for there will be a bad sort arise from matter that has every mark of mildness, and a good sort from such as appears more of a malignant nature; nay, indeed, different people inoculated with the same matter taken from the same pustule, have been known, and that commonly, to have different sorts of the small-pox.

However, I would always advise it to be taken from such subjects as labour under the disease in its mildest state, and have the most favourable appearing pus—for it is our business to take matter from those constitutions which, by the appearance of the pocks, bespeak the greatest purity, and freedom from any morbid taint—for all people are not agreed upon what the malignity of this complaint depends; and many conclude that other disorders may be inoculated with the small-pox—these, therefore, furnish arguments sufficient for great cautions in our election.

DESCRIPTION. After the punctures are made in the arms, on the second day, if the parts are examined by a good magnifying glass, there appears commonly about the puncture an orange-coloured stain, whilst the skin around it seems to contract; but sometimes an inflammation takes place on the second day, then disappears totally—this, though, may arise from irritation from the puncture, trifling as it is; we remain, therefore, doubtful whether or not infection has taken place—but if it has succeeded, on the fourth or fifth day from the operation, a hardness and itching, with an apparent inflammation of the part, is perceptible; and a kind of blister, filled with a transparent liquid, is observable.

On the sixth day, a pain and stiffness affects the arm-pits.

On the seventh, but *more frequently* upon the eighth, symptoms which precede the eruption make their appearance; and these are commonly such as shew themselves in general at the commencement of fevers—cold chills and heat alternate with each other, a slight degree of languor, heaviness of the eyes, and slight pains in the head and back, are, now and then, perceptible; and these remain pretty constant till the small-pox manifest themselves.

The inflammation now begins to spread very fast, and, round the punctured part, a great number of small eruptions may be seen crowding together, which increase during the course of the disease.

Surrounding the incision, and extending itself half way round the arm, but more commonly describing the breadth of a shilling, a circular, or oval, efflorescence is observable. The larger this inflammatory appearance is, which is smooth to the touch, and not painful, the fewer are the general pustular eruptions—and, indeed, I have observed, when the thread was made use of, this was the case, if the discharge from the incision was very copious—now all the symptoms cease, and the business seems to be perfectly finished.

UNFAVOURABLE SYMPTOMS. Though this is the progress of the disease in general, yet it sometimes happens that there are deviations, and that we have not inflammatory appearances on the wounded arm till the eighth day, then it will suddenly shew itself, with the other concomitant symptoms—this is not recorded as a favourable omen—still it sometimes is in this point deceptive.

But if the colour around the puncture continues pale, though it is barely perceptible that inoculation has succeeded, instead of becoming red or inflamed—if the edges of the wound spread but little, and remain flat, unattended with itching, or any kind of uneasiness—if, instead of a red inflammation about the incision, it should have a purplish cast; if red, and the circle round the puncture should be narrow and deep, and the incrustation around it should be depressed and concave in the center, they are considered as unfavourable signs.

FAVOURABLE SIGNS. On the other hand, if on the second day there should be an orange-coloured stain round the incision—an itching there in two or three days—a kind of elevation of the scarf-skin, resembling a blister, without much inflammation, on the third or fourth day—a pain or stiffness in the pit of the arm, a large efflorescence round the puncture, on the tenth or eleventh day, or sooner—a hardness spreading circularly from the

the puncture, the inflamed part of the arm elevating itself, and forming a point, terminating in a dry scab; these are said to form very pleasing prognostics, and flatter us with the most agreeable expectations of a happy conclusion.

CAUSES. These are similar to what we have before recited in the small-pox—for if the constitution is not possessed of the predisposing cause, no effect will be produced, though the variolous matter should be thrown into the habit.

CURE. In the evening after the puncture is made, it hath been thought adviseable to give a few grains of the calomel powder, as much as will procure two or three evacuations, purging it off in the morning with some gentle cathartic. (No. 79, 80)

Or, instead of the last, a dose of Glauber's or Polychrest salt, proportioned to the age and constitution of the patient—these are advised to be given every second morning and evening, till the appearance of the eruption. This is superfluous, two doses will be in all common cases sufficient, immediately after the operation, and a day or two before the attack. If the inflammation is slight at the puncture, the dose of calomel must be increased.

Afterwards we have nothing to do but to guard against the febrile symptoms, which are in general so mild, that there is little occasion for medicine.

At the commencement, if necessary, what has been just above prescribed are advised; and repeated two or three times, if the disease appears to be of a late or unfavourable sort.

In the intermediate days, should the fever run high, Clutton's febrifuge spirit, or the æthereal spirit of vitriol dropt into any aqueous fluid, so as to make it agreeable, may be taken often in the day.

As soon as the symptoms of the eruptive fever come on, the patients should continue to be exposed to the cool air as much as possible; for it is the best cordial and corrector of febrile affection in this case, as I have repeatedly experienced. Indeed, when the febrile symptoms appear to be violent at the onset, great good has occurred from the administration of an antimonial emetic and purgative.

Where the fever appears to be languid, and the patients are of weak and delicate constitutions, some caution is here necessary; for these, perhaps, it will be sufficient to be kept in a large well ventilated room, especially if the weather should be very cold; and they should be supported on something of a more cordial and stimulating nature, than if things were otherwise, and the patients more robust, who should be kept, during the eruption, on a mere acescent diet.

After

After the eruptive state is over, and the pustules begin to mature, small broths, jellies, white wine whey, or such like materials, may be allowed.

In this state of the disease, the weakly and more delicate may require to be kept in bed, and supplied with more cordial applications, in order to perfect the suppuration of the pustules, and totally free the constitution from any remains of the variolous matter.

If we proceed in this prudent manner, adapting our mode to the particular constitution of our patient, we shall very seldom have much trouble; but should there arise uncommon complaints now and then in the inoculated small-pox, it will be necessary for us to proceed as directed in the natural disease, (265, &c.) observing whether it verges to the nature of inflammatory nervous, putrid, or mixed fever, and conduct ourselves consistent with what the symptoms point out to our judgement.

§ 3. MEAZLES.

Called by the Latins *morbilli*, as being a disease of less consequence than the small-pox; as by *morbillus*, we understand *morbis parvus*, a trifling disease—they have also been named *rubeole* and *roseole*, from the redness attending the eruption, or putting on a colour similar to roses—like the small-pox, this disease appears to be a native of the East, and has certainly a great affinity with that complaint, as they are both generally of an inflammatory nature, equally infectious, and never affect the constitution twice—some authors say, *except very rarely indeed*—because the habit cannot be brought a second time into such a state, as to feel the effects of either of these infectious particles, so as to reproduce the disease, should they circulate ever so plentifully in the fluids a second time.

They generally make their appearance in the month of January, rage most violently about the vernal equinox, and disappear in July.

They commonly attack children; but all constitutions, which have never before felt their influence, are the objects of this infection—hence, in the more advanced stages of life, many with them are afflicted—they are propagated by the particular constitution of the air, and become highly epidemic.

Some have considered the attendant fever of the simple inflammatory sort; others as a catarrhal, or inflammatory remittent; some say it is of the peripneumonic kind, and conceive the eruption, not as critical, but symptomatic, as the cough and affections of the lungs will remain after that is over.

Accord-

According to my conception, it is in general a febrile disease of the inflammatory kind, always infectious, electively affecting that membrane, called *scheiderian*, which lines the inside of the nose, throat, and lungs, and, in its progression, the skin—though I have seen the affection of the lungs so extremely slight, as not to call forth the least attention, where there was a diarrhoea attended through the whole course of the disease.

DESCRIPTION. Its progress is divided into three stages—the *first* precedes, the *second* attends, and the *last* succeeds the completion of the eruption.

At the commencement there are chillness and heat alternately succeeding each other—soon after, on the second day, the fever increases, attended with considerable sickness, great heat, thirst, languor, and loss of appetite—the tongue is white—there is a heaviness of the head, and drowsiness—sneezing—brightness of the eyes, from whence flow a thin humour---the eye-lids swell, and, *most commonly*, there is a dry and very troublesome cough---sometimes vomiting and looseness are associates with these, the last of a green colour, when children are getting their teeth---and all these symptoms gradually increase till the **ERUPTIVE**, or **SECONDARY STAGE** begins, which occurs generally on the fourth day; about which time small red spots, like flea-bites, make their appearance in the face, which run into clusters, forming larger spots, rising above the skin, perceptible only to the touch, not the sight; afterwards broad spots spread over the body downwards, not quite so prominent, though of a higher colour than those of the face---when the eruption is finished, the vomiting ceases, but the fever increases; and the cough, with the difficulty of breathing, become more violent---a sweat and diarrhoea now and then supervene.

On the sixth day, or thereabout, the **THIRD STAGE** commences, on which the spots on the face grow dry, and give it a rough appearance; and in three days more they totally disappear from the whole body; for on the ninth day nothing is to be seen, except a dark coloured fine farina, or appearance like bran all over the surface of the skin---at this period, the fever and cough are sometimes alleviated; sometimes increased, and terminate in a dangerous peripneumony---and not unfrequently a looseness succeeds the disease.

After this we are not to conclude the patient free from danger, unless, during its course, some considerable evacuation has taken place, either by sweating, vomiting, urine, or looseness; for without something of this kind occurs, the cough will continue, the fever will return with additional violence, and the

strength not be recovered except with great commotion in the system, and, consequently, extreme danger.

Though what we have described is the most frequent mode of the measles appearance and progress to their termination, yet sometimes they differ so much, that authors have denominated them ANOMALOUS, or IRREGULAR, as deviating from the common course, or as in the eruption putting on the appearance of the small-pox—both which we shall describe before we proceed to the cure.

The *anomalous* differ from the mild sort, because the eruption happens not on the fourth day, but sometimes before, and sometimes after—the symptoms preceding, as well as accompanying the eruption, are more severe—the eruption does not begin so much on the face as on the shoulders and trunk of the body—and because it is attended by more dangerous consequences.

Besides the symptoms which are common in severe fevers, there are some which are more peculiar to eruptive ones of this sort; for here the pulse is small and frequent—respiration is short and quick—there is an oppression of the hypochondres--(33. 38.)--the urine pale—a great drowsiness—twitching of the tendons—spasms—delirium, with redness and watery appearance of the eyes—load on the eye-lids—and pricking pain in the skin---a soreness of the throat comes on, with a shrill hoarseness, and violent cough, in which children appear almost suffocated, vomit up their food, and grow black in the face---when, after so severe a struggle, the eruption appears, the fever in part deposits its malignity, the disease is at its height; and the fever persists in the same manner to the drying of the spots, which yet, according to SYDENHAM, did not seem to put on that branny appearance as before described.

The event of this fever is often dreadful and deadly; for, on the eruption receding, the fever and difficulty of breathing are augmented---a peripneumony and diarrhœa, occasioned by the striking in of meazly particles, comes on; which last is not without danger, as happens often in the milder sort, because *here* it is acrid, dysenteric, and excruciating---sometimes a cough, difficulty of breathing, and hectic fever succeed---at other times, a general dropsy, but oftener obstinate inflammatory affections of the eyes.

The *OTHER* is said to be common at PARIS, wherein the eruption is different from that of the common regular measles; for they are more prominent, suppurate perceptibly like the small-pox, and occasion the face to swell considerably; but then they are attended with the cough, watery eye, and other affections,
arising

arising from defluxions, which chiefly distinguish them from the small-pox.

CAUSES, whether inducing or proximate, are similar to those of the small-pox, (269.) the peculiar particles only creative of the disease being altered.

CHARACTERISTIC SIGNS. An infectious inflammatory fever for the most part, with which are associated, a defluxion of a thin watery humour from the eyes, tickling in the nose, sneezing, dry cough, more or less violent---on the fourth day, sometimes sooner, sometimes later though rarely, small spots running together, perceptible to the touch on the face, but broader on the body not perceptibly elevated above the skin, break forth, which in three days after are converted into branny scales in part, and totally disappear upon the ninth day.

CURE. In so mild a manner will the measles sometimes affect patients, that little is necessary to be done, except abstinence from all animal food, or heating applications; and drinking freely of thin watery acescent liquids, such as common fig drink, made agreeably acid with lemon-juice, apple water, or some such like fluids.

But should the febrile symptoms run high, we must proceed as directed in the small-pox, (26.)—but great attention must be paid to the affection of the lungs—oily emulsions and linctures, (No. 81 to 83.) may therefore be prescribed occasionally, in conjunction with the other remedies, calculated to keep the febrile affections within proper limits.

Should oily medicines disagree with the stomach, as is sometimes the case, we must have recourse to the class of demulcents, (187.) (No. 84.) using the pectoral decoction, or that of linseed as common drink.

After the eruption is completed, slight opiates are serviceable—but as nature generally performs her crisis either by sweats, looseness, or urine, we must observe what way she directs her efforts, and proceed as we have before directed in cures of this kind, where they occur in fevers not eruptive.

As soon as the redness of the skin goes off, and the spots begin to die away, gentle purgatives must be administered, at proper intervals, and the patient return to his usual mode of life gradually, (209.)—care also should be taken, that patients expose not themselves too early to the cold air, for these are apt to bring on a very disagreeable cough, asthma, and consumption, from affections of the lungs, or of some other parts.

Some perplexing symptoms, notwithstanding all our attention, will now and then present themselves, which ask for our utmost exertions.

Should a *delirium* come on the fourth day, wherein the pulse is small, it is an unfavourable omen; still by the application of leeches to the temples, it may be mitigated or subdued.

It is also a bad sign if *the fever should increase and become violent*, accompanied with intense thirst, about the termination of the disease—and should there appear *great danger of suffocation*, as will sometimes happen from too great an afflux of serous humours on the lungs on the ninth day, we must fly to bleeding, according to the strength of the patient, and apply blisters, to prevent an inflammation coming on from that cause—which, if it cannot be done, suffocation may be the immediate consequence—or, escaping that abscess will probably succeed, a hectic fever and consumption.

A *diarrhœa*, or *dysentery*, is apt to come after vomitings of green materials; and continue, though the measles have finished their course—these complaints yield only to bleeding.

The measles which put on the appearance of the small-pox, require the same mode of treatment as the mild sort.

But in cases of the anomalous species, we must be directed by the nature of the fever, and proceed in our modes of cure, as pointed out in our treatment of the different kinds of the small-pox.

A moderate looseness, with a softness and gentle moisture of the skin, alleviate all the febrile symptoms—but the slower the eruption, so much greater will be the danger—of which also we may have strong suspicion if they make their appearance on the second, or the fifth and sixth day from the attack—if they should retrocede, and be associated with delirium, or become livid, the worst is to be dreaded—too high a degree of redness or paleness of the pustules, great prostration of strength, vomiting, great restlessness, difficulty of swallowing; or other spots, purple-coloured, like flea-bites, are also dangerous appearances—the contrary of all which will flatter us with most pleasing expectations.

Few people have thought the measles to be a disease of sufficient consequence, to avail themselves of those assistances which, as in the small-pox, might be derived from inoculation in this complaint. As for my own part, practically I cannot say any thing on the subject; but if we may believe the authority of some who have made the experiment, or be allowed to depend on reasoning from analogy, our labours might be happily rewarded—for it is asserted, and appears probable, that from inoculation from infected blood, on the sixth day a slight fever manifests itself most commonly, though it is very moderate, unat-
tended

tended with loss of sleep and inflammatory symptoms; and it is neither succeeded by a hectic fever, cough, nor inflamed eyes; so that we find we should be freed from a train of the most dangerous symptoms, and consequently relieved, in many cases, from the most distressing apprehensions.

§ 3. WATER-POX.

This obviously takes its name from the fluid with which the pustules are filled.

DESCRIPTION. This is a disease which attacks children about two or three years old, without any remarkable febrile symptom or indisposition; it chiefly appears on the face, in small red pustules full of a clear or whitish watery fluid, about the size of a lentile; some of which dry off in two days, whilst others increase; and all fall off in a dry state within the space of four, generally leaving no pits in the skin, as they are commonly attended with no inconvenience.

There is another variety which frequently affects infants a week old, and push forth similar watery pustules, about the navel, arm-pits, and fingers, which grow dry within three or four days, and fall off in a scab.

The cure left totally to nature is always sufficient; and nothing more necessary, than, if it is cold weather, keeping in bed, living upon gruels, weak broths, and warm liquids.

§ 4. CHICKEN, OR SWINE-POX.

Having had in the course of practice so little opportunity of attending the complaint throughout, and when called, there being so little to be done, I confess it scarce ever awakened my observation, as nature, after the stomach and bowels were cleared, if such attempts appeared necessary, always performed the cure. I am happy to have it in my power to supply my readers with an account drawn by the pen of so accurate an observer as Dr. HEBERDEN, who says, in enumerating the

SYMPTOMS, that the pocks in many break out without any previous signs or illness; in others they are preceded by a slight degree of chilliness, lassitude, cough, broken sleep, wandering pains, loss of appetite, and feverish for three days—the pustules in most of them are the common size of small-pox; but some are less—they are never confluent or numerous.

On the first day of the eruption they are reddish—on the second there is at the top of most of the pustules a very small bladder, about the size of a millet-seed; this is sometimes full
of

of a watery and colourless liquor, sometimes it is yellowish, contained between the cuticle and skin—on the second, or at the farthest, on the third day from the beginning of the eruption, as many of these pocks as are not ruptured seem arrived at their full maturity, and those which are fullest of that yellow liquor very much resemble what the genuine small-pox are on the fifth day.

A thin scab is formed at the top of the pustule from the cuticle being burst, on the first or second day, which contains this thin fluid, by accident, or, perhaps, from rubbing to allay the itching; the swelling of the other parts abates without its being ever turned into pus—those which escape being burst, have the little liquor turn yellow and thick, and dries into a scab—on the fifth day of the eruption they are almost all dried and covered with a crust.

The patients suffer little, except some languor of spirits, strength, and appetite.

This disease wants no remedies.

It is distinguishable from the small-pox by the appearance on the second or third day, from the eruption full of serum upon the top of the pock.

From the crust also, which covers the pock upon the fifth day, at which time the small-pox is not at the height of its suppuration.

But of this disorder there appears a more malignant sort.

For three or four days all the symptoms which precede the eruption run much higher—on the fourth or fifth day the eruption appears, with very little abatement of the fever—the pains, likewise, of the limbs and back continue—to which are joined pains of the gums—the pocks are redder than the common chicken-pox, spread wider, and hardly rise so high, at least not in proportion to their size—instead of one little head, or vesicle of a serous matter, there have been from four to twelve—they go off just like the chicken-pox, and are distinguishable from the small-pox by the same marks.

Besides, the continuance of the pains and fever after the eruption, and the degree of both these, though there be not above twenty pocks, are not observable in the small-pox.

From the similarity of the chicken, or swine, and small-pox, we may be able to account for the tales we have had of people being affected with the small-pox twice, or having them after being inoculated, and succeeding—for some may have been inoculated from the chicken, instead of the small-pox—and this is one of the strongest reasons that has induced me to insert this account, that the error may be avoided—as very little is necessary in this case to be done by medicine more than what has been before

fore recited—taking care, that if the febrile symptoms run high, to treat it in the same manner as the small-pox under similar circumstances.

It is also worthy of observation, that those who have had the small-pox may have the chicken-pox ; but those who have had the chicken-pox cannot be infected again by it ; though, to such as never had the distemper, it is as infectious as the small-pox.

§ 5. SCARLET FEVER.

This takes its name from the scarlet coloured efflorescence upon the skin.

This fever is inflammatory, and attended with different kinds of eruptions ; whence it has been divided into two species---one called SIMPLE SCARLET FEVER---the other, SCARLET NETTLE RASH FEVER, from its eruptions being similar in appearance to those marks left by the stinging of nettles.

DESCRIPTION. At the commencement the symptoms attend which we find in continued fevers, among which there is no great degree of sickness ; but on the fourth day the face swells, the eruption manifests itself externally, which are red, more copious, broader, and of a much more florid colour, but not at the same time so uniform as those which attend the measles ; but they arise without any cough or watery eye, which distinguishes them from the measles ; they appear and recede two or three times during the disease ; besides, the redness shews itself to be uniform, as if the skin was suffused with red wine, not breaking in clusters of pustules upon the breast as the measles do---in three or four days it entirely ceases---the scarf-skin soon after peels off, and there continues on the surface of the body fine bran-like scales, which are successively supplied for two or three times.

Sometimes eruptions break out on the face and rest of the body like the stinging of nettles, with much itching, which are elevated above the skin, soon increase, of a pale-rose colour ; sometimes with protuberances almost erysipelatous, and roughness like tetters---sometimes, on the fever remitting, they disappear ; but about the evening shew themselves, with fever, and a troublesome hot itching---and, in three or four days, like the former, entirely cease, when extremely small scales separate from the skin.

CAUSES. The same may be advanced here as in the measles. (283.)

CHARACTERISTIC SIGNS. This is an infectious inflammatory or remittent fever, of short duration, with a swelling of the face on the fourth day, attended with a florid redness all over the

the skin, with broad spots, running at last together, not elevated above the skin; or with spots like the stinging of nettles, which in three, four, or five days disappear, occasioning the scarf-skin to peel off, and covering the surface of the body with fine branny scales.

CURE. This is of the most simple nature—abstinence from animal food, keeping out of the cold air, free use of watery liquids, thin gruels, and moderate warmth whilst in bed; but should the symptoms run very high, and the pulse be very quick, full, and strong, bleeding may be necessary, once, perhaps, and the use of saline mixture, (No. 1.) or small doses of antimonials, (180.) or nitrous powders, (No. 2.) keeping the body gently open, by the use of the mildest aperients, if costive, (171, 172) (No. 3. 22 to 24.) and, after the whole is over, and the scarf-skin begins to peel off, two or three doses of gentle physic should be given. (172.) (No. 19 to 22.)

But sometimes convulsions, or great drowsiness may come on in the beginning, particularly with infants, a large blister may be applied between the shoulders, and a quieting draught, similar to No. 4, given every night, agreeable to the age and constitution of the patient—using, for common drink, milk and water, balm tea, in which may be dissolved some gum arabic, and small portions of nitre.

Doubts have arisen about the existence of this fever, Dr. CULLEN having never seen it in its simple state—however, it certainly does exist, and as described by SYDENHAM, of which repeated experience has convinced me; nay, indeed, I have known it seize several children in the same family, and most generally at the end of summer.

There is another species arranged here by some authors, filed the MALIGNANT SCARLET FEVER—but of that we shall take the opportunity of speaking under the head of Sore Throat, as that is one of its peculiar and distinguishing symptoms, and may probably be derived from that source.

§ 6. MILIARY FEVER.

This receives its name from being attended with eruptions in size and appearance like *millet seed*, which are sometimes red, at others white—the first filled with a coloured serum; the last with a transparent fluid, called lymph, accompanied with scarce any redness at all.

Though the existence of this fever has been doubted by many, still, it is generally now allowed, that there is a fever of this peculiar kind, originating from specific infectious particles getting
into

into the blood, and producing its effects upon the machine—yet it may, and often does arise from the injudicious management of other fevers, by treating them with too heating a regimen—hence it is considered also symptomatic, and often joined with the small-pox, meazles, and other fevers.

Like some other of the eruptive class, this is simple and complicated.

DESCRIPTION. At the commencement there is a chillness succeeded by no extraordinary heat—the fever is mild, attended by an uneasy and copious sweating—there is no general pain, but the head appears slightly affected—no thirst—the appetite continues—the pulse depressed, and rather hard—and the urine appears healthful.

The patient soon after, on the second day, begins to be fearful and apprehensive, *constantly sighing, from a sense of weight and tightness at the pit of the stomach*—has uneasy dreams—*dejection of spirits—the head confused*—his sweats perpetually smell sour—there are a variety of sudden and involuntary motions, and *constant restlessness*—the pulse is *smaller*, and increased in *quickness*—---and there is a certain sensation of tingling numbness in the fingers—and the urine pale and limpid.

On the third or fourth day, seldom later, red or white eruptions break out on the neck, breast, and back, seldom on the face, preceded by pricking pains, sometimes itching—at this period chillness and heat succeed each other repeatedly, and the sweating becomes profuse—from thence, for about the space of thirty hours, eruptions continue to come out, which are filled with a thin serous fluid, having round their base an inflammatory appearance. The symptoms now begin to be alleviated—the sweating continues, though not so profusely—the mind begins to be less oppressed---the urine puts on a higher colour---the pulse becomes more soft and regular---and about the seventh day the pustules for the most part grow dry, the scarf-skin peeling off in scales.

This is a pretty accurate description of the mild species of this fever, in which we may expect the eruptions will very soon make their appearance, when there are an uncommon dejection of spirits, watchings, confusion of the head, much oppression on the breast, with a weak quick pulse; for these are considered as the certain symptoms of their near approach.

CAUSES. Both the inducing and immediate are similar to what we have delivered when speaking of the meazles. (283.)

CHARACTERISTIC SIGNS. A mixed fever, attended with anxiety---dejection of spirits---frequent involuntary sighing---strong smelling sweats---and pricking of the skin---small distinct

spots, for the most part of a red colour, breaking out most frequently on the third or fourth day on the neck, breast, and back, seldom on the face, whose tops resemble, after one or two days, very minute pustules, which continue only for a short space of time.

CURE. The indications of cure are the same as in other eruptive fevers.

Now this fever must in this place be considered of a mixed nature, (240.) verging rather more to the nervous than inflammatory class—however, if they attack those of strong, robust, full habits, and there should be a great degree of vascular action, bleeding may, perhaps, be necessary, but that rarely—we should rather proceed as we have directed when speaking of the simple continued fever, to the use of saline mixtures, with small doses of antimonials, (181.) (No. 6 to 9.) from whence, if the stomach should be foul, a vomiting will ensue; this will abate the sickness, take off the oppression, produce a gentle perspiration, determine the morbid matter to the skin, moderate the febrile symptoms, and occasion, though not a less copious, a more expeditious eruption—and before *that*, cooling purgatives are beneficial, though not afterwards. (171, 172.) (No. 3. 22 to 24.)

Bleeding, it must be observed, is only admissible in *the first stage* of this disease—afterwards it is so far from being of any use, that convulsions and death itself are often the fatal consequences.

Cooling acids may be also allowed in the beginning; but when the eruption has appeared they are prejudicial—diluting, emollient, and acceſcent liquids may be used—and from fomenting the feet and legs with tepid fomentations, great advantages have been derived.

But should the constitution be different from what we have specified, that is, rather debilitated than languid, and the nervous system appear to be in too inactive a state, we must apply to such things as are of more cordial nature, to support and invigorate the constitution; but out of them we must select those of the milder species; for, by stimulating the habit too violently, we should prevent the separation and expulsion of the morbid matter, and be instrumental in occasioning it to fall upon some of the nobler parts internally.

Hence, then, such cordial volatile medicines as we have described in the nervous fever, or some things similar, should be administered—and wine and water, or white wine whey may be allowed to be drank occasionally.

Blister should also be applied; and as soon as one has ceased to discharge, another must be laid on, because it is observable
that

that the evacuation produced by them, as well as keeping up the stimulus, affords great relief; for, on the evacuation ceasing, all things wear a more favourable aspect, which are always altered for the better, on the reproduction of the discharge.

But sometimes, instead of the convulsive symptoms being mitigated after the eruption, they increase, attended with such a train of symptoms as are indicative of greater degree of danger.

For the febrile affections grow more violent, increasing about mid-day and at night—the sleep is disturbed with dreadful dreams—the sweating decreases—the skin is hot and inflamed—the head is affected with pain, producing the sensation of inward distension—the face appears fuller—the tongue is dry and white—the pulse small and quick—and the urine copious, thin, and watery.

On the third day of the eruption there appears a great augmentation of violence throughout—the heat is burning—the pustules subside—the sweat ceases—the skin becomes rough—the tendons start—the patients are extremely restless, froward, and loquacious—they grow delirious, and are convulsed—they become thirsty—the pulse is hard and quick—and the urine copious, and like water.

The belly, which before was costive, is now the reverse, evacuating foetid bilious stools—should any sweat return, this violence on the pustules breaking out again is mitigated—and on the succeeding day the eruptions become more copious and larger, the former beginning now to dry—notwithstanding which, about the third day the second crop creates new and similar distress, though in a milder degree than the former—a third and fourth crop will succeed, until the last stage of declension, similar to what occurs in the milder species.—Still in this state of the disease there is a bilious foetid looseness, with rolling of wind in the bowels, which continues—the urine sometimes feels hot, and appears like milk whey without any sediment.

Patients afflicted with this fever seldom recover before the fifteenth or twenty-first day.

This fever has been by some considered of the inflammatory class; by others it has been called the acute malignant—but it appears to be truly of the mixed kind, and might properly be looked upon as a *malignant miliary mixed* fever.

Sometimes the progress of this fever is slower, and longer continued, the pustules not striking out with a proper redness, but sinking down in the skin or retroceding inwardly, liable to return at some other time, and occasioning a slow recovery; and some-

times death ; but its progress is different in some degree.

This fever is apt to seize the delicate and relaxed, who have a thin and acrimonious state of fluids.

In addition to the pustular appearance above specified, the tendons start continually—a delirium and convulsions come on—the head-ach, though considerable, is not very acute—the tongue trembles—the velocity of the pulse is not so great in the eruptive stage ; but the freedom and quickness are irregular ; sometimes it almost intermits—the urine is various, sometimes thin or higher coloured, but oftener turbid and small in quantity—but a viscid sweat breaking out which is fœtid, having for its associate some larger vesicular eruptions, and pustules of size more considerable, putting on an appearance almost similar to the small-pox, alleviate these symptoms.

After this stage, now and then the patients become extremely drowsy, and have continual twitchings of the tendons, and convulsive eructations, then become stupid, forgetful, and fall into a state of lethargy ; to which succeed convulsions, which are followed slowly by snoring and death.

This fever, should the patient recover, is apt to return about the same time in the succeeding year, and often seizes women during their lying-in—whence there is a suppression both of their milk and those discharges after child-birth, called lochia.

The mildest sort of the miliary fever generally terminates in seven, the malignant mixed in fourteen, and this in about twenty-one days.

There can be little doubt of the nature of this fever, if we pay attention to the symptoms, for they bespeak it truly nervous—hence, for the cure, we must refer to what we have said on the nervous fever, (216.) making, perhaps, a freer use of blisters, and observing a quicker succession, for the reasons advanced. (290.)

Sometimes, added to the miliary eruptions, such a train of symptoms will attend, as clearly to shew its disposition to be of the putrid kind ; little deviating from what we have recited when speaking of putrid fever, (221, &c.) and consequently will require similar applications—but still, though much cannot be expected from blisters in symptoms simply putrescent ; yet such is the alleviation they bring in miliary eruption, that to neglect them would be an error of no trifling consequence—and, if to these we add the use of bark, mineral acids, and wine, little more can be expected to be done in this fever, as these are the principal materials from whence we can expect any considerable success.

Should

Should a looseness come on under any of the circumstances of this fever, we must proceed in the same manner as we have before directed, taking care not to be too busy in putting a total stop to it by the use of astringents; for if that happens, we may expect a great increase of febrile affections, which is invariably the case; we should rather attempt to solicit a flow of humours to the skin, by small doses of ipecacuanha, (181.) (No. 57.) and support the strength of the patient by wine; and other generous antiputrescent cordials:

Those signs which portend a favourable conclusion are,

If *convulsions* begin with, or precede the eruption, and, upon ceasing, the pulse becomes soft and full, the *pustules filled with serum* grow large—if they are of the red kind, and manifest themselves with a gentle perspiration, free and easy respiration, and the pulse as above specified, the fever having remissions.

But if the *sweat* should be violent and premature, particularly if the pulse at the same time should be small, they indicate mischief.

A *tingling stupor* or *numbness* in many places, shews that the morbid matter is copious; but if it is slight, attended with watery urine, sweats, and a small pulse, it not only indicates the same, but shews the virus not easily determined to the skin; hence dangerous.

Should there be *great dejection of spirits*, the patient become very fearful, lose all hope, rise up terrified, these are bad omens—nor is it a promising appearance if the *skin does not swell* from the eruption, nor be affected from the application of blisters or cupping-glasses.

If the *head-ach* goes off before the fourth day, in those of full habits particularly, it is an unfavourable sign; and a *small pulse, growing more so after the eruption*, with tension, and quickness increasing, denotes convulsions, and dissolution, or extreme danger.

If the *urine* is constantly watery, or changes to that from a reddish colour; this affords no good sign; but it bespeaks a long continuation of the disease if it is like milk-whey.

Drops of blood from the nose at any time bespeak great danger; and, when drawn, if it should be of a scarlet colour continually without serum, it is a bad sign.

If, at the conclusion of the disease, the *scarf-skin peels not off at all, or only sparingly*, the *convulsive symptoms still continuing*, we may expect a relapse.

WITH REGARD TO THE ERUPTION, the red are more favourable than the white; and the sooner they make their appearance,

so much the worse ; for those which appear upon the third or fourth day often prove mortal on the seventh or eighth ; they are less dangerous if they break out on the sixth ; the later the safer ; for the sooner they appear, the disease proportionably of longer continuance, and more apt to return.

After the eruption all *oppressive convulsive symptoms* are ominous, and those which follow the subsiding destructive.

If the *pustules* are *small, and very numerous*, they bespeak danger—nor is it a favourable sort *which do not prick, but itch when they are pushing out of the skin*—but if they *recede*, and afterwards the patient vomits, sees badly, has a rattling noise in swallowing, hiccoughs, and stammers in talking, these import extreme danger.

By how much more copious and prominent are the pustules, by so much sooner will death make its approach, if they subside—and those which sometimes subside, and sometimes appear, indicate a long continuance of the disease.

§ 7. ERYSIPELAS, or SEROUS INFLAMMATORY FEVER, commonly called SAINT ANTHONY'S FIRE.

This is considered as an inflammation of the skin, and subjacent fat, attended with an inflammatory fever, originating from an acrimonious humour and inflamed state of the thinner part of the blood, from which nature endeavours to free herself by expelling the morbid portion from the habit, and depositing it on some external part, chiefly the skin, in broad red spots, which creep from place to place—hence its name, from the Greek words *eruo*, to draw, and *pelus*, into the vicinity.

DESCRIPTION. It generally commences with chillness and shivering, which in a day or two are succeeded by a violent sudden redness, and pain, attacking some part or other, chiefly the face ; and has for its associates an acrid heat, rosy-coloured efflorescences, with great tightness of the skin, slightly swelled, which is broad and diffused, not circumscribed---the febrile affections increase, with heat, anxiety, thirst, often also a white tongue and strong breath.

But it is often attended with greater degrees of violence---*then* it begins with great shiverings, succeeded by a burning heat, acute head-ach, retching and vomiting, till the erysipelas appears, which is sometimes deferred to the second or third day ; when the febrile symptoms are alleviated, and the sickness ceases, tho', not unfrequently, they continue in a slighter degree to the height---sometimes, when the disease runs high, the fever continues, the

the brain is oppressed, delirium comes on, and matters wear an unpromising aspect.

Upon the tumid part vesicles arise, and run along the forehead hairy scalp, eye-lids, neck, forming a circle round them, which, if injudiciously treated, become gangrenous, and creates delirium---sometimes the humour filling the pustules, and issuing from thence, instead of being thin and serous, is thick and gluey, and forms a thick scurf or crust, continuing fixed before they fall off, for many days.

The disease frequently terminates in seven days ; but sometimes it will proceed in a similar manner for eight, ten, or twelve days, and at last go off by a copious sweat, of which restlessness, with concomitant shivering, and some anxiety, though not much, for a small space of time, will be sometimes the forerunners ; and from thence may the critical effort be prognosticated. During the progress of this complaint, the whole skin and inside of the mouth is very dry.

CAUSES. The *remote* or *inducing* are said to be, violent mental affection, particularly anger and fear---a sudden cooling of the body, heated before by the strong power of the sun---drinking of, or bathing in, too cold water---a suppression of the natural or artificial evacuations---moist and rainy seasons---and, in fine, whatever occasions the obstruction of perspiration.

The *proximate* or *immediate*, acrimonious and heating particles derived from humours that are contaminated and retained, which ought to be thrown out of the habit.

CHARACTERISTIC SIGNS. An inflammatory fever, for the most part, of a few days continuance, with a superficial, solitary, diffusive swelling, of a red rose colour, going off upon pressure, and returning ; of an uniform smoothness, unless made rough by eruptions ; and is attended with an acrid burning, or itching heat.

CURE. As this disease, though neither infectious nor contagious, evidently arises from some acrid humours ejected out of the mass of fluids, and collected in the cuticular vessels, through which it ought to escape out of the habit, we must be very cautious not to lower the fever too much by excessive evacuations ; nor hinder the exit, or cause the retrocession when discharged upon the skin by the injudicious administration of cold or astringent applications ; for the indications of cure are, so to regulate the moving powers, as to enable them to throw the offensive matter out of the constitution, and prevent any retrocession on the internal and vital parts.

Hence, therefore, must we proceed, as in other cases, consistently with the strength of the habit. If it attacks those of strong full

full constitutions, we bleed in proportion to the strength, and give the cooling cathartics, such as purge off the ferous humours in the most certain and easiest mode, as vitriolated natron, acetated tartar, Polychrest salt, Epsom salt, manna, tamarinds, crystals of tartar, jalap, &c. (171, 172.) (No. 1. 22 to 24.) and, on the intermediate days, we should give at intervals antimonial joined with nitre, acetated tartar, or the saline mixture; to which gentle aperients may be added, if necessary.

Emetics in this case have been found efficacious—mustard poultices applied to the feet, and bathing the legs and feet in warm water are very beneficial, where the head and face are affected—and, under this circumstance, bleeding and purging may be repeated, till an alleviation of the symptoms are produced.

In all our endeavours we should attempt to promote gentle evacuation by the skin with cooling diaphoretics.

There have been different opinions with respect to local applications to the part affected; some advise mild and softening applications to the part affected, as fresh cream, the ointment of elder leaves, tepid watery fomentations, or the use of the water of acetated litharge—however, the fine powder of fenugreek, or wheat flour, sprinkled upon the part, and lying in bed—or, if a fluid begins to ooze out of the vesicles, chalk or starch may be sprinkled on a soft cloth, and thus applied; for all repellents, whether of an aqueous or oily nature, are hurtful.

Should the swelling be suddenly depressed, from a retrocession of the offensive matter, attended with internal oppression and anxiety, and at the same time the pulse becomes weak and sinks, we must immediately apply blisters, and have recourse to vinous and other cordials; wine may be exhibited freely, volatile and other stimulants, which have more permanent action, such as the nature of the circumstances require.

Sometimes this disease attacks the trunk, chest, shoulder-blades, or sides, and frequently makes its appearance lower, encircling the middle of the body, like a belt—hence called by the Greeks ZOSTER and ZONA, a belt; and by the English SHINGLES, from the Latin word *cingulum*, a girdle.

In this complaint little yellowish pimples, but more frequently of a livid hue, arise which are wont to corrode, like a tetter, which species they resemble.

The fever which is the associate of this eruption is only slight; but, should the pimples be pushed back, symptoms of greater consequence present themselves.

There have been instances where the erysipelas has begun with shivering, heat, delirium, violent pain of the back, head, and other parts of the body, where there was no inflammation; but
upon

upon the third or fourth day, the hot burning humour was deposited in the glands under the arms, or in the groin, and there formed abscesses; or descended into the feet, and brought on mortification; and from a retrocession of the morbid matter, life was in the most extreme danger.

For if this matter cannot be made to re-appear, the peccant humour is deposited upon the brain or breast, and death is shortly the consequence—if the deposition happens upon the brain, delirium immediately succeeds, the visage is flushed, the eyes sparkle very quick, then follows madness, terminating fatally in lethargy; but should it be upon the lungs, the heat and anxiety is intolerable, of which no words are adequate to convey a perfect idea.

Notwithstanding these appearances, our modes of cure vary not from that which we have before described.

Though, in general, the erysipelas very seldom comes to suppuration, still, when that is the case, it does not maturate kindly, and frequently forms disagreeable and ill-conditioned ulcers.

Sometimes a mortification will threaten, then must we apply such things as are calculated to stop its progress, as decoction of bark, lime-water mixed with camphor and spirits of wine, or camphorated spirits of wine, with tincture of myrrh.

In the slighter kinds of erysipelas there is no great danger; but if a violent inflammation, attended with stupor, drowsiness, or delirium, should seize patients with an acrimonious state of fluids, much are the consequences to be dreaded.

Should the inflammation recede or be repelled, it brings on delirium, internal inflammations, asthma, convulsions and mortification; or should the tumid part grow livid, we may conclude the latter of these affections at hand. With respect to the pustules, the thicker and whiter the matter, the less will be the degree of danger; but should it be thin and pale, so much more in proportion will it be increased.

The PLAGUE, and that fever called PEMPHIGUS, from the Greek word *pemphix*, bulla, a bubble or vesicle, or BULLOUS OR VESICULARY FEVER, should be next treated on; but as I have had no experience in the former, I shall proceed to speak on the latter only as far as it has fallen under my observation, as the disease itself seems not to be perfectly settled by authors.

§ 8. PEMPHIGUS, BULLOUS OR VESICULARY FEVER.

This takes its name from the blisters with which it is accom-
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panied

panied breaking out on the surface of the body, of the size of hazle nuts.

In three instances they were attended with a fever of the continued kind, purely inflammatory; and in one it appeared to be contagious, attacking the wife of one man labouring under the disease a few days after the eruption, who would not sleep from him during his illness. It was in these cases treated as an inflammatory fever, free use being made of the saline diuretics, particularly the acetated kali.

The other two had scarce any febrile symptoms, but copious eruptions filled with yellow serum, which went off, and returned at different periods—diuretics in these two cases were used in the beginning, and, at the conclusion, bark was joined along with them, and cordials, there appearing obvious remissions of the febrile affections, which were slight, and seemed to point out the nervous system to be the seat of the disease, from the languor and lowness with which the complaint was attended, and the pulse at the same time being weak, small, irregular, and quick.



S E C T I O N XIII.

INFLAMMATORY DISEASES.

C H A P. I.

ON INFLAMMATION.

IN a former section we have spoken of inflammatory fever, (201.) which we have said depended upon a peculiar state of the vascular system and blood, the moving powers, or part of them, put into too strong motion, and supported in the violence of their action by the peculiarity of that state: here the affections were general, produced not by, or dependent upon, any other disease.

But in this place we are to treat of local affections, having a fever for their associate; hence it is to be considered, not as a primary, but as a secondary disease, produced by, or dependent on, some other; consequently only a sign that some other malady reigns in the habit—the first of these fevers is called **IDIOPATHIC**, the second **SYMPTOMATIC**.

Now,

Now, in inflammation there are some particulars observable, which, on examination, will lead us to the cause, and enable us to lay down certain rules for the cure.

In a part under a state of inflammation there are *more than natural heat, redness, tension, pain, and swelling.*

The FIRST is produced by the blood circulating to the part with more than usual force, and being there collected in too great quantity; and wherever that is the case, there is a proportionate increase of warmth—the SECOND is owing to the blood being pushed into those vessels, which, in an healthful state, are only permitted to carry the serous or thinner fluids strained from the sanguinary mass—the THIRD arises from a too great quantity of fluids crowding into the containing vessels, by which they are distended, and their fibres distracted, which produces the FOURTH, or PAIN—and the FIFTH deduces its origin from the distension, and the fluids being too freely pushed into the cellular membrane; or exuding through the coats of the vessel, by their natural parts being too permeable, from the superabundant quantity of liquids they contain.

Now all these effects may be produced by *stimulus* of some nature applied to the parts affected, increasing the action of the vessels, which solicits the fluids to these parts too rapidly, and produces *distension.*

Hence it appears obvious, that these two causes are adequate to create these effects—one of which acting will occasion only a slight degree of inflammation, of no long continuance—but if they both are conjoined, then arises an inflammatory disease of greater violence and duration; inasmuch as, from these two causes co-operating, the effects produced will be more vehement.

But in the parts which are most solid, or in which the vessels continue their course in a straight direction, should any inflammation arise, *there* will consequently be greater degree of pain, than if it happens in the softer viscera, or glandular parts: because there is always a higher degree of tension in the vessels—hence in firm membranous parts, the skin, ligaments, tendons, cartilages, and bones, (21, 22. 24.) inflammations are found more acutely painful, whilst in the softer parts before-mentioned, the pain is sometimes slight, and always inferior to that of the other.

But external accidents will, by producing the two causes assigned, (298.) create local inflammatory symptoms, whilst the vascular system in general shall perceive no disturbance, which will not at all be indicated by the pulse, or other febrile affections; so that if a fever should arise, as it generally does in all considerable inflammations, it is to be considered as owing its ori-

gin to this cause, and is a consequence, therefore only esteemed a symptom; for excessive heat, thirst, and restlessness, are concomitants of vascular affection, and generally attend inflammatory diseases, independent of any fever, except what they themselves create; whilst weakness and loss of appetite, essential symptoms attendant on primary or idiopathic (298.) fevers of any continuance, are wanting, and seem to belong to affections of the nervous system.

But some inflammations owe their origin to fever, and may be occasioned by peculiar causes; either from the elective power of morbid matter thrown into the habit, that is, a predilection for fixing on some peculiar part or parts in preference to others, as in the small-pox, measles, gout, rheumatism, &c. or from local constitutional imperfection—hence we find, different parts may become the seat of inflammation from general causes also; for if the resistance of any part is supernaturally increased, and a stimulus should be applied to them from acrid humours circulating in the mass of fluids, and fixing there, an inflammation will be the unavoidable consequence—and these very often terminate fatally, should it in fevers fix in some of the nobler parts; and to these is often to be attributed in many fevers the death of the patient.

If we reflect on the cause of inflammation, we shall find, that every part of the human machine, which is plentifully supplied with blood vessels interwoven in their texture, is subject to this affection—and *mostly so* are those parts which are liable to be exposed to external injuries; or to stimulating materials, which circulate and are buoyed up in the atmosphere; though some of the very thin membranes, the scarf-skin, hair, and nails, may be considered as exceptions.

Hence, according to the consequence of the part affected, will be the disturbance of the constitution, and the degree of danger; and these will manifest themselves according as the use of those parts is most immediately connected with those actions of the constitution on which life is immediately dependent, by which the machine is nourished, and its parts kept in proper order, and from whence it has its power of motion, distinguished by the terms *vital*, *natural*, and *animal*—upon all which, acting in unison, is constituted the welfare of that machine.

With respect to the termination of inflammation, there are five modes, RESOLUTION, EXUDATION, SUPPURATION, MORTIFICATION, and SCIRRHUS.

Inflammation is considered to terminate in RESOLUTION when, in the first instance, the flow of blood is diverted from the part affected, the violence of vascular action allayed, and strength given

en to the coats of the vessels, so that they may be properly supported, and the dissipation of the load of fluids which have been collected be procured; or they may be reformed into the habit—by EXUDATION, which occurs only in superficial inflammations on the skin, and membranes lining internal cavities or passages, or covering the different viscera, when distension of the arteries, and an enlargement of the pores of their sides takes place, by the rapidity of motion producing more than usual force on the vessels in an inflammatory state, occasioning great increase of heat, and expansion of the contained fluids.

In this manner frequently ends erysipelas, by pushing forth little pustules or blisters, and freeing the vessels which are inflamed—so also in burns and wounds matter exudes, which is termed digestion; and as this comes on and continues, so are the parts affected alleviated, and totally cured. Nature also makes use of this expedient in catarrhal and other slightly inflammatory complaints of the lungs, as well as in the gonorrhœa virulenta, or clap; for all these are superficial inflammations—by ABSCESS, or SUPPURATION, when neither of these processes takes place, but the violence of motion continues or increases, and the weakness of the vessels still remains; then the fluids which have been collected in the cellular membrane are either too copious, or become so thick and viscid, that they cannot be absorbed and received back into the circulating fluids, nor pushed out, and thus evacuated through the pores of the skin—amongst these another process takes place, termed FERMENTATION, wherein the vessels, cellular membrane, and muscular fibres are melted down, and a white thick matter is formed, called pus; but this happens chiefly in more deep seated inflammations in some viscous, fleshy, or glandular parts—by MORTIFICATION, when the force of circulation is so violent against the sides of the inflamed vessels, that the coats are ruptured; or when the arterial coats are so very weak, that the blood bursting into the cavities of the cellular membrane there stagnates, and quickly corrupts, forming what is called in medical language GANGRENE, or SPHACELUS; the first considered by some as mortification in its incipient state, the last when it is perfectly formed; but others, when the skin and cellular membranes are the parts affected, give it the former name; when the muscular, the latter; when the bones, it is called CARRIES; so, in fact, they are all truly mortifications, though only of different parts.

When mortification takes place, there is a cessation in the part of all pain, from the destruction of the living solids; hence the protrusion of blood, which becomes of a darker colour than before, or has a livid appearance; hence its stagnation and corrup-
tion

tion, and deprivation of its natural colour—after this, a spontaneous separation of the parts which compose it takes place, the thinner part is driven forwards towards the surface, and elevates the cuticle into blisters.

From what has been said, we may form a judgment why mortifications are most likely to occur in those whose fluids are in an acrid state, old people, and those of dropical habit; because the solids are soon broken down, and many slight accidents are sufficient to produce these dangerous, and often fatal effects, which we at first observe with an unsuspicious eye, when they are attacked by inflammations of some force; for, indeed, in constitutions not labouring under these defects they rarely happen.

The last termination we shall mention is, *SCIRRHUS*, here considered as a hard indolent tumour only, and chiefly presents itself in the spongy viscera, as the lungs, mesentery, womb, and particularly the glands in various parts of the machine.

And this generally arises from the circulation in the glands, generally being too languid—hence are obstructions formed from the fluids inspissating within the small capillary, or hair like tubes, and only producing vascular distension so gradually, that there is no great excess of pain, nor any violent increase of heat, so that proper power is wanting to create that process which induces suppuration, and also force sufficient to break down the vessels, and produce mortification, which in these parts are said seldom to take place, except from acrimony of the sharpest nature pouring down on the vessels of any particular gland, and being there deposited.

Inflammation then may be considered only as one cause of scirrhus, which induce these tumours by imperceptible degrees, and very slow beginnings, which are attributed to some peculiar indescribable defect of the humours, terminating frequently in cancerous affections.

They are, besides, productive of great mischief from the compression of the neighbouring parts, as palsy, impeded deglutition, barrenness, and many other complaints.

From what has been said on this subject of inflammation, we shall be readily and forcibly struck with the most eligible modes of termination.

The first is by *resolution*, the second by *exudation*, if the matter exuded can have a free exit out of the habit; but in those inflammatory affections which make the membrane that lines the cavity of the breast, and abdomen, or belly; or which cover the different viscera contained in them—the objects of their attack; and if the matter which from that cause exudes from their surface should remain there, a hectic fever will be the consequence, though

though the original pain ceases, and a fresh concurrence of symptoms will then succeed. But suppose neither of these terminations can be brought about, we then wish for ABSCESS, because only the inert solids suffer chiefly, and seldom have any permanent bad effects, if they can only be permitted to clear themselves; for then the parts heal up; nor have the nerves or blood-vessels suffered any material destruction, though the last may have been distended, and suffered greatly from such distension; yet, once freed from the impelling cause, soon recover their tone, sufficiently to perform properly their constitutional action; and as for the inert solids, they are again soon supplied, by the digestive powers of the machine forming fresh materials from nutriment, in order to renew the substance lost, by the application of homogeneous particles poured into the interstices of the cellular membrane.

In all our attempts to cure inflammatory complaints, our first aim is *resolution*, whether the part affected be external or internal; the former of which is obvious to ocular demonstration; the latter, by heat and pain affecting some inward part, accompanied with general febrile affections; of which we shall speak more particularly when we come to treat on parts labouring under this complaint; at present we shall shew how we attempt to bring about resolution, when any considerable inflammation calls for our assistance.

If it occurs in habits which are plethoric and strong, the pulse full and quick, and much increase of heat, we pursue the same course as was delivered when treating on inflammatory fever, § 2. Section VIII. attempting to allay the intenseness of motion in the vascular system, and abating the excess of heat, which is the natural concomitant.

But here sometimes the complaint yields not to general bleeding, we then should have recourse to local, by the application of leeches or cupping-glasses near the part affected, which will very often succeed; and as there is too great a flow of fluids to the part, we endeavour to lessen that by smart cooling purges, (No. 3. 22 to 24.) giving freely in the intermediate times between the purges, nitrous powder, (No. 2.) mixed with small doses of antimonials, (180.) gentle aperients, (171, 172.) and other cooling saline diuretics, (176.) applying to the parts themselves fomentations, (No. 85.) with which let the part affected be fomented three or four times a day, and continued at each time for half an hour, or longer, taking care not to apply it too hot, but only moderately warm.

Afterwards the inflamed part should be covered with a white bread poultice, in which a sufficient quantity of ointment of marshmallows

mallows has been used—some advise a poultice of bread boiled in litharge water, called vegeto-mineral water; others of wine-lees thickened with bran; and several prefer that of bean-meal and simple oxymel, softened with oil of roses—and should the tumor and inflammation be by these means dissipated, the poultices should be changed for stupes moistened with the camphorated lotion, (No. 86.) and occasionally applied to the parts.

By these means commonly resolution will take place, the humours collected in the part being dissipated, and the remainder absorbed back into the habit, by the lymphatic system being freed sufficiently, and stimulated to a reproduction of its action in the part affected.

But, notwithstanding our efforts, if the common symptoms should gradually increase, such as great heat, throbbing in the part affected, suppuration will take place, and an abscess be formed—here, then, our mode of cure must be altered, and we must aim at soliciting the matter externally, and freeing the habit in a proper time, by the application of those things which promote suppuration, thin the external skin, and determine the contained matter towards the surface.

Hence poultices made of mallow leaves, boiled in milk with linseed, or linseed itself—boiled lily roots, or onions—the maturing cataplasm—or the gum plaister, will answer the purpose; for these, by clogging the pores of the skin, prevent the dissipation of the humours, increase the heat of the contained fluids, promote the process of fermentation, and render the humours more active in dissolving, or melting down the solid parts, as well as soften the integuments, and, by their stimulus, solicit the fluids to push outwards.

From these applications, then, the abscess will soon be in a proper state for opening; which must be performed in the most dependent part, if the swelling is equally soft throughout, and the skin of a similar thinness; if not, where the part is softest, and the fluctuation of the matter most perceptible; and the aperture should be made of sufficient width, in proportion to the size of the tumor, that a free egress may be allowed for the matter.

After this, the healing of the wound in good constitutions is seldom attended with any difficulty—dry lint placed gently in the part, and that covered with the ointment of yellow resin, spread thin upon lint or tow, are the general dressings at first; and from these fresh granulations will appear; and in time fill up the cavity occasioned by the loss of substance; but should the sore appear foul, covered at the bottom with a white or brown appearance, instead of red granulated flesh, we must apply some of those things

things considered detergent, or cleansing; as the ointment of gum elemi, of yellow resin, mixed with a proper proportion of red precipitate, or green basilicon; these will cleanse the ulcer; and then dry lint as before, and proper bandages, will in common perform a perfect cure.

But sometimes, instead of a thick well-coloured laudable matter, there will be a thin ichorous discharge, occasioned by an acrimonious state of humours, while, at the same time, there will be febrile hectic symptoms.

Under these circumstances, in order to produce a laudable supuration, and take off the hectic affections, in relaxed habits, joined with an acrid state of the fluids, bark is the most efficacious remedy; but where the discharge depends more upon the state of the fluids, in order to correct or evacuate the acrimony, a course of mercurial medicines, as the alternative mercurial pills, two of which may be taken twice a day, with one or two pints of the decoction of the woods, (No. 87, 88.) bid fairest for success.

There is a species of complaint very common belonging to this place, which here calls for our attention, and that is, a

BOIL, or BILE, though this seldom terminates by resolution, but commonly maturates—it is a hard circumscribed tumour, rising to a point, hot, red, and very painful, which, maturing, may be let out, or left to burst, from whence a small portion of matter only will issue forth, in proportion to the swelling, leaving a slough behind, which is called a **CORE**, and must be cast off before the wound can be healed.

In its hard and painful state, we can have no expectations of discussions; our endeavours, therefore, are to be confined to hastening the suppuration, as we have before directed, (304.) or apply bean-meal and honey, which is a favourite remedy with some—when it is opened or burst, we must proceed as before under the same circumstances in abscess (304.)

But these eruptions very often originate from a depraved state of the fluids, which occasion their frequent returns, and are extremely troublesome—here we must have reference to the alterative course before recommended. (305.) which must be persisted in for some time, now and then interposing gentle cooling purgatives.

Thus far we have spoken of those inflammations which lie superficially, and are alleviated by *appeasing* applications; but sometimes the seat of the complaint will be too internal for them to become effectual, we then apply over the part stimulants, which have been found highly efficacious in producing resolution—indeed, where complaints have been slight, applications of hot sand or salt, stimulating cataplasms, as of mustard, pellitory, horse-radish, Burgundy pitch, volatile liniments rubbed well upon the part, have been found serviceable auxiliaries; but

when the symptoms have been more severe, blisters applied over the part contribute the most readily to promote resolution.

These remedies, and the sedatives and emollients we have before spoken of, where the cause has been excess of the vibratory motion of the vessels dependent on some stimulus, and external remedies can be applied, have been thought necessary—or when inflammation proceeds from fractures, wounds, contusions, or such like causes, discutient fomentations, (No. 85.) are most of all to be relied on—when it depends on *local relaxation*, or a *decrease of vascular resistance*, as it sometimes does, particularly in inflammations of long standing—bleeding and purging should be cautiously advised, and all emollient poultices and fomentations omitted; for these, by their relaxing properties, will add to the cause—a contrary plan must be adopted, calculated to give strength and activity to the vessels, that the offending cause may be repelled.

For local applications, alum, white vitriol, acetated litharge, lapis calaminaris, and turty prepared, mixed with rose-water, are occasionally used; as are also tincture of roses, and slight decoctions of bark, and eye-waters; gargles made of these well adapted to relieve inflammatory complaints arising from a debilitated and relaxed state of the vessels—and where the general state of the habit is so relaxed, as to demand the use of tonics, or such things as invigorate the system, bark and cold bathing are highly useful.

By the modes we have laid down, we shall almost always be able to conquer any common inflammation; or conduct our patient through with the greatest ease and safety, if abscess should take place—but there are some niceties to be observed, which we shall particularize.

Fomentations should never be pushed too far; for, after taking off the violence of vascular motion, if continued, they induce a state of relaxation in the fibres, from which succeed debility and obstinate tumours—instead, therefore, in persevering in their use, when excess of vibratory motion is subdued totally, and in many cases when it is allayed, corroborants then become necessary, (No. 86.) or something of a similar nature.

With regard to abscesses, we must observe, that they all point, and the contained matter endeavours to make its way to the parts where it finds the least resistance—hence those formed in the lungs rupture internally; those in the viscera of the belly move externally—those which are deep seated, and formed under strong tendinous expansions, run along the spaces between the muscles, and appear at a considerable distance from whence they first originated.

Besides, they do not all originate from inflammation preserving its regular course; they are sometimes critical, the effect of
nature

nature freeing the constitution from some morbid matter, by throwing it out of the circulation, and depositing it in some local situation, which is attended with the most happy consequences, admit the vital organs, or the parts of high importance in the habit escape, from its being deposited in them. Abscesses of this kind are generally preceded by some fever; and this deposition of matter is called *metastasis*, or translation, which occurs chiefly in parts where the vessels labour under some uncommon weakness, from some cause which has left them in that state.

Under this circumstance, as soon as ever the skin is in a proper state of thinness, the matter must be let out by incision, if it can be come at, else would it, by too long continuance, dissolve too much of the solid parts, destroy the texture of the nerves and blood-vessels, produce a caries, or mortification of the bones, by penetrating through the membrane which covers them, and lay the foundation for a hectic fever, from the matter being taken up by the absorbent vessels, and carried into the habit.

In cases of EXUDATION, (300.) where the surface appears only excoriated, not ulcerated, we can give the happiest assistance, when it shews itself externally by *internally* exhibiting such things as tend to promote resolution; and having recourse *externally* to such as are calculated to cleanse, heal up, and strengthen.

And when such is the circumstance on the membranes of the breast, of the belly, or the external surface of the viscera, as it sometimes is, we are assured, from the appearances on dissection, where there has been no perceptible ulcerations or destruction of the solids, though matter has been found in these cavities; by early advice judiciously given, many might be saved from some of our most fatal complaints, pulmonary, and some other consumptions; for many of these arise not, *in the first instance*, from ulcerations or little glandular tumors in the lungs, called tubercles, but from matter exuded from membraneous surfaces, which acquire a degree of acrimony, and then, by melting down the solids, cause ulcerations: and I have no doubt but by a very early application to such modes as we have specified for resolution, these mischiefs might be often prevented—but here the great misfortune is delay; patients, in the infancy of this complaint, by dabs, nostrums, and old family prescriptions, losing the favourable opportunity which ought to be given to the well informed physician, applying for such aid only when some of the internal parts have suffered irrecoverable injury.

Though we have before spoken of the erysipelas, or Saint Anthony's fire, which arises from a febrile cause, there is another sort which sometimes succeeds external injury; and in this, if the inflammation runs high, bleeding and purging are highly efficacious; and in the intermediate times, betwixt the *admission*

ting of purgatives, I depend upon saline diuretics, (176.) and even those purgatives which I prefer, are such as most powerfully evacuate the ferous humours, such as vitriolated natron, Rochelle salt, regenerated tartar, jalap, syrup of buckthorn, &c.

The external applications in these cases should be such as will expel the obstructed fluids through the pores of the skin;—hence diluent fomentations are recommended, decoction of linseed, and white poppy heads, with elder and chamomile flowers, and a proper proportion of soap liniment, one ounce and a half to two ounces to a quart, whilst there is no break upon the skin—chalk, or fine flour, spread upon the part, and confined with a fine rag—and lotions of the vegeto-mineral water are thought by some highly serviceable, where resolution is the aim.

But when pimples or painful blisters make their appearance, equal parts of lime-water, oil, vinegar, and comphorated spirit of wine, form an efficacious composition to lay on the inflamed part, by means of a rag dipped into, and well loaded with it—or the ointment called unguentum tripharmacum, or that of acetated cerufs, have been considered as proper applications.

We must now proceed to speak on MORTIFICATION, another termination of inflammation, (301.) which generally proceeds in the following manner. At first the swelled part begins at the point to grow yellow, the pain is mitigated, and a dingy colour comes on; the skin is flabby and soft, retaining the impression made by a finger upon it, it loses almost all sensation, and grows livid—a tumid elevation of the part is perceived, which diffuses itself around—there appears pustules of a thin yellowish acrimonious liquid, which are black at their basis—then the skin and parts underneath corrupt, become dead, black, losing all sensation, and dissolve into a fetid stinking sanies—the mortification creeps onwards, and seizes the neighbouring parts—at length shivering, fever, cold sweats, small and weak pulse, and fainting, bespeak the approach of death.

In the beginning, when the source of this mischief has been external injury, and there is much strength of constitution, indicated by a full, hard, quick pulse, high degrees of heat, pain, and dryness, the cooling method is to be pursued, as if resolution was to be brought about; and though in this we cannot hope to succeed, we are warranted in this mode of procedure, by the extreme violence of the symptoms, with intent to bring on a state of suppuration, by checking the vehemence of the circulation, and preventing the vessels from being ruptured—besides, exudation would be favoured from the continuance of relaxing and emollient fomentations.

But mortifications arise from very different sources, and affect different constitutions—should they happen to patients, therefore,

fore,

fore, whose blood is in a thin, acrid, putrescent state, which will be indicated by debility of the pulse, loss of strength, lowness of spirits, foetid thin acrimonious discharges, and, should blood be taken, by its texture being very weak, we must have recourse to invigorating and cordial remedies; as bark, wine, mineral acids, and such like, in order to prevent the access of gangrene, and produce a separation of the part affected; and, in cases of great pain, opiates have been advised with very fortunate effects; indeed, whether the cause is internal or external, the free use of opium is directed, and considered as the greatest internal cordial known—as an external application, the antiputrescent lotion, (No. 90.) is recommended to be applied frequently, warm, as it is also stimulant and digestive—cataplasms of cummin-seed, and the carrot poultice, are much approved; but if emollients are mixed with antiseptics, (192.) they are said to assist in the separation of the putrid parts, and stopping mortification.

The last termination of inflammation is SCIRRHUS, (302.) or indolent tumor, which arises from obstructions forming in some of the glandular parts, as before described, where either no supuration takes place, or if it does, it is in no small a degree, that it has not power to melt down the solids sufficiently to remove the induration—or it may be brought on by the too long use of warm fomentations, soliciting too free and long continued flux of humours, relaxing the vessels of the parts, hence occasioning hard swellings, which are not easily removed.

Now these swellings which we here consider are totally free from all acrimony of any peculiar nature, and, as the fluids are in a sound state, it is often the most eligible practice not to interfere by any applications—because in young subjects they will very often gradually wear away; in older ones continue generally without creating any uneasiness or inconvenience—but should the hardness be so considerable as to require particular attention, warm vapour or steam directed to, and confined to act upon the part affected, is one of the most efficacious applications in this case.

Sometimes these tumors are soft and flabby, then frictions, and well adapted bandages, where they can be applied, are useful; or letting cold water fall from some height upon the part, or pumping upon it, seems best calculated to succeed.

Thus far has it been necessary to premise, before we enter on the inflammation of the different parts, wherein the treatment of the inflammatory symptoms will be nearly similar; but there will be some deviation necessary on account of the parts affected—for the INFLAMMATION OF THE BRAIN will require a different treatment from that of the *eye*—OF THE EYE from that of the

the *lungs*—OF THE LUNGS from that of the *intestines*, &c. to which we shall now proceed.



C H A P. II.

INFLAMMATIONS OF THE HEAD AND NECK.

§ 1. PHRENITIS, INFLAMMATION OF THE BRAIN.

THIS is so called from the Greek word *phren*, mens the mind ; because the brain is supposed to be its seat.

DESCRIPTION. The symptoms at the onset are, with respect to the general affections, similar to what occur in the *beginning* of the inflammatory fever, only the head seems to be more violently affected ; for in this there is pain and pulsation of the head, with a sounding noise, a ringing in the ears, and disturbed sleep—the eyes are painful and inflamed, almost always shunning the light—the countenance is puffed, the hearing acute, and the patient is irritated from the slightest noise—the pulse, for the most part, is weak, sometimes hard, *always* low and depressed—the urine looks pale like water—and continued watchings are protracted to the eighth day—the pulsation of the carotid arteries is perceptible—sometimes blood flows from the nose—there is great debility, anxiety, and frequent sighing—the tongue is sometimes white and moist, sometimes black and dry—the patients are uncommonly irascible, labouring under a ferocious delirium and convulsions.

CAUSES. The *remote* or *inducing*, severe drinking of inebriating liquids, particularly ardent spirits—watchings, long exposure to the scorching rays of the sun, particularly if the head is uncovered—violent rage—too deep and long continued thinking—excessive grief—violent love—a suppression of the piles, and those discharges in women after child-birth, called lochia.

The *proximate* or *immediate* CAUSES, a true inflammation of the membranes of the brain, or a congestion of blood in the body of the brain, or both conjointly.

CHARACTERISTIC SIGNS. An acute febrile affection, attended with pain of the head—redness of the face and eyes—inability of bearing the light or sound—perpetual watching—a violent delirium, or delirium attended with some degree of apparent drowsiness.

This

This disease terminates between the seventh and fourteenth day, by resolution—hæmorrhage from the nose; in women, by a flow of the menses—looseness, or deposition of a copious sediment in the urine;—but should not some of these occur, suppuration or mortification is the consequence: it often, though, degenerates into other diseases, as mania, i. e. delirium or madness without fever, lethargy, melancholy, or idiotism—when people recover, they will be affected a long time with giddiness, weakness and pain of the eyes, quickness of hearing, and a heaviness of the head.

We should be particularly careful in distinguishing this disease from the delirium, that common attendant in many fevers: and this knowledge may be acquired by observing, *that in this species the delirium comes on first, and is perceptible and violent before there is any great degree of fever*—in other cases it is consequent to fever which has continued for some days before the delirium is manifest; and the degree of phrenzy is correspondent to the degree of fever; but in the true inflammation of the brain the degree of fever is nearly adequate to the delirium, which is equal to what we meet with in real madness, from which the inflammation of the brain is scarcely to be distinguished, but by the shortness of the continuance; as in the space of a few days it must either inevitably terminate in recovery or death.

This disease is either idiopathic, (299.) or symptomatic, (299.)—the *first*, wherein the head is primarily affected, rarely appears in temperate climates—but the *second* very often occurs, and most frequently about the crisis of fevers; and is generally attended with chillness, tremor of the joints, distension about the pit of the stomach, coldness of the extremities, thin urine discharged too copiously, or too sparingly; and most commonly, if violent, proves mortal, from the constitution being reduced to a state of great weakness from the preceding disease.

From the great consequence of which the brain is to the life of man, this becomes a most dangerous disease, from that part being affected—men experience greater degrees of violence in this disease, and recover with more difficulty than women—the more the patients are, and the more they recede, from their natural state and disposition, the greater is the danger—bleeding at the nose is a good omen; but if the phrenzy changes into a lethargy, it is bad; and total loss of, or a trembling voice, convulsions, hiccough, may be looked on as extremely unfavourable symptoms.

CURE. In a case so desperate as this, without we can diminish the violent force of the circulating fluids against the sides of the vessels, remove the obstruction, and take off the congestion, and that soon, from the delicate texture of the brain, it must end
fatally

fatally—our applications, therefore, must not only be powerful in themselves, but most expeditiously administered, with intent to divert the flow of blood from the head, at the same time attempting to allay the violence of vascular action, and strengthen the vessels of the part affected.

For these purposes, therefore, we should have recourse to bleeding—some advise in an erect posture, copiously, and from a large orifice, till the patient faints, giving preference to the large vein of the neck, called jugular, or the temporal artery; or, where the menses are obstructed, to the veins of the feet; and this must be repeated according as the strength of the patient will permit—if the pulse, as sometimes happens, will not allow this, particularly after the third day, then cupping-glasses or leeches must be applied to the temples, or the internal part of the nostrils must be scarified, and blood taken away in one of these modes—and immediately after smart purges of the cooling kind, (171, 172.) must be administered, or glysters—the lower extremities should be bathed in warm water, or the feet and legs wrapped up in warm moist cloths or flannels—the head should be shaved, and washed with cold vinegar, or cold water poured upon it; nay, some advise even the application of ice; and after proper evacuations, when there appears a reduction of strength, a blister may be applied to the head—large doses of nitre, mixed with a little camphor, may be given every four or five hours, or fixed sal ammoniac, (176.) or CLUTTON's *febrifuge spirit*, so called, may be mixed freely with the patient's drink, which should be of the diluting and watery kind—mustard poultices may be applied to the soles of the feet; and, in fine, every thing which can solicit the blood from the head, and abate the violent motion of the fluids.

The bedchambers should be large, dark, and cool—every thing should be kept extremely quiet; the posture should be as erect as possible, or, at least, the patient should lie with his head elevated.

If matters, by the means here made use of, take not a favourable turn within the first four or seven days, there comes on a drowsiness, and propensity to sleep, which soon puts a period to the unhappy patient's existence.

Sometimes we find it goes off by the efforts of nature producing some evacuation, (311.) which, should they come on before the vessels of the brain suffer much from being over distended, the termination of the disease may be very fortunate—if not till the vessels have been much injured, the senses seldom return perfectly to their original standard—nay, some affirm, it ends in stupidity, and madness, which are rarely curable.

§ 2. OTITIS, or OTALGIA—from the Greek words, *ous*, auris, the ear ; and *algos*, dolor, pain ;—

INFLAMMATION OF THE EAR.

By this is meant an inflammatory state of the internal parts of the ear, whose membranes, from their being well stored with nerves, are extremely sensible ; and from being attached to bones, feel pain very acutely.

DESCRIPTION. An inflammation of the more internal parts, attended in common with great pain, and that pulsatile, or throbbing head-ach, and some slight feverishness ; sometimes when it affects in a more severe degree, the fever is stronger—the head more painful, accompanied with delirium.

CAUSES, *remote* and *inducing*. Any extraneous body insinuating itself into the ear, that has the power of exerting any stimulus—acid humours falling upon the membranes of the ear—obstructed perspiration—currents of cold air pouring forcibly into the ear, through narrow crevices, or cracks in doors or windows.

The *proximate*, or *immediate*, are similar to what we have before specified, and which occurs in all inflammation, where the parts are in a state of predisposition, sufficient to feel the effects of those acting causes which are more remote—indeed the proximate and immediate causes of these complaints are so exactly similar, that we shall have no occasion to specify them.

CURE. When the affections are slight, a little warm oil, with a few drops of the tincture of opium, may be dropped into the ear—or a decoction of poppy heads may be injected—these will sometimes take off the complaint when trifling :—but should it be more severe, bleeding and purging may be requisite—applying also cupping-glasses, or leeches behind the ears, and blisters—bathing the feet also in warm water—and when the pain is violent, an opiate, No. 4, may be administered at bed-time.

But should the throbbing pain, notwithstanding our efforts, still continue, suppuration will be the consequence ; which we must endeavour to promote by warm poultices applied externally ; and wait for the bursting of the abscess—which, when it happens, we must endeavour to keep the ulcerated part clean, by injections of warm water in which is dissolved a little soap—or of barley water, to four ounces of which add—one ounce and a half of honey of roses, and half an ounce of tincture of myrrh—this will assist the discharge of matter, keep the ulcerated parts clean, and expedite their healing.

§ 3. OPHTHALMIA—from the Greek word *ophthalmos*, oculus, the eye ;—

INFLAMMATION OF THE EYE.

This disease is so very obvious to every common observer, that there seems scarce a necessity for putting down the appearances, in order to distinguish it ; however, to preserve the regularity we have adopted in other complaints, we shall give of it a concise view.

DESCRIPTION. This complaint at the beginning is attended with heat, redness, and swelling, or fulness of the eye—and often feels as if a particle of sand, or a small fly, had got into it, and there fixed—the eye is painful, tears flow, which appear hot and scalding—the angles of the eye are often filled with a viscid yellowish matter, particularly after sleeping—the sight is weak, and all light is offensive—in the more severe species, the pain is very acute—the pulse quick and rather hard—the light intolerable—there is a perceptible pulsation of the arteries—and the eyelids, with the circumjacent parts, swell ; but when it is still more severe, the membrane covering the white of the eye elevates itself above the darker coloured part, called cornea, from its horny appearance—and the patients complain of flies flying before them, and feel other unpleasant sensations of this kind, the effect of imagination.—Afterwards succeed suppurations, spissitude, of the humours—spots upon, and thickness of the cornea itself.

From this account there appears to arise three material considerations : FIRST, whether it is slight, affecting only the vessels of the outward membrane of the eye ;—SECOND, whether it is very severe, extending itself to the eyelids, and their edges, called tarsi ;—THIRD, whether it is extremely violent, fixing its seat in the internal vessels of the eye itself, and in those of the membrane called *retina*, at the bottom of the eye, which is considered the seat of vision ; in which case it is attended with high degree of fever, intolerable pain, and often delirium. For these distinctions will make some alterations in our modes of cure.

CAUSES. The remote, or inducing, are—external injuries occasioned by blows—dust getting into the eye, or other stimulating bodies—a free admission of cold wind—sweats suddenly suppressed—looking frequently or long at the fire, the sun, or other strong glaring colours—exposure to the cold air of the morning and evening, which succeeds hot and sun-shiny weather---acid and metalline fumes---couching, or extracting a cataract. It also may proceed from internal causes---such as the suppression of salutary evacuations---humors repelled---drying up of issues---setons

setons---fistulas---or ulcers---indigestion---too long watchings---night studies---other diseases of the eyes---small-pox---and measles.

CHARACTERISTIC SIGNS. Redness, and pain in the eye---with incapability of bearing the light.

CURE. With regard to this we are to take into our account the immediate cause—whether it is an increased irritability in the vessels; or a want of proper resistance in their coats; or they both co-operate together—for, according to the acting cause, so should our applications differ; as what would in one case produce a good effect, would in the other be attended with dangerous, or at least disagreeable effects.

In the slighter degrees of this complaint, the cure is perfectly easy, as little more is requisite than external applications—washing the eyes with warm milk and water, mixed with a little brandy—conserve of roses—roasted apples, and some such remedies..

But in more severe affections, if the habit is full, general bleeding and purgatives are necessary, with a cooling regimen ---to which, if the disorder does not soon give way, not less than three leeches should be applied, as near each other as possible, in the hollow of the temple nearest the eye affected---opening the jugular vein is often serviceable;---bleeding in the eye itself has by some been strongly recommended; but the operation is apt to irritate, and is only necessary when the inflammation is kept up by a speck in the eye, which is fed by one or more blood vessels, then they may be divided.

In obstinate cases, keeping the head shaved is highly proper, and applying blisters about the size of half a crown over the orifices made by the leeches, is useful;—bathing the feet in warm water should not be neglected.

With respect to the local applications, the chief, and most useful, is the tinctura Thebaica of the London Pharmacopœia as an opiate, joined with some stimulant, for without, it will not answer;—at first the anodyne eye-water (No. 91.) may be applied to the eye two or three times a day. In slight cases, this is often sufficient; and, indeed, in the more obstinate, two or three drops of the tincture may be dropt into the eye two or three times a day.—The body should be kept cool by proper diet and medicines, and the eyes free from any thing that can irritate them.

In some cases, though, where the inflammation has been long continued, its duration will be apparently owing to want of proper resistance in the vessels—hence must recourse be had to such medicines as give strength and activity to them; still some cau-

tion is here necessary—they should only be applied when the eye is in the weakest state of inflammation, which generally happens in the morning, after the eye has been kept some time free from any irritating cause.—In these cases the coagulum aluminosum of the old London Dispensatory may be mixed with a common poultice, and applied to the eye affected for three or four hours in a morning—and in the remainder of the day, tincture of opium---afterwards as the eye gets strength the vitriolic solution, No. 92, may be used.

By this method I have seen inflammations of the eyes of long standing, cured, which had resisted every other mode---the quantity of the vitriol may be gradually increased to 10 or 12 grains.

In all inflammations of the eyes arising from common causes, one of the modes above specified will generally succeed---only we should be careful not to use any of the more stimulant applications, till the inflammation begins to relax of its violence, for if they are used too soon, they will rather increase, than subdue the malady.

But sometimes this disease will be occasioned, and supported by some morbid humour in the habit---as that called scrophulous---venereal---or some other which we are incapable of discovering.---In the two former cases, we must make use of those remedies pointed out in the treatment of those complaints.---in the latter, a course of alteratives in which mercury has the greatest share, will be most efficacious. Under these circumstances I have known small doses of calomel, with antimonial powder and rhubarb, or jalap, given twice a day, and washed down with the decoction of the woods, interposing proper purgatives once in a week or ten days, be very successful---and greatly assist the application of external remedies.

In obstinate cases, where blisters have been ineffectual---issues, and setons in the neck, have been recommended ;---or having the lobes of the ears pierced, and exciting a discharge by skains of silk being passed through them in the manner of setons.

The gluing of the eyelids together, should be prevented by insinuating a little mild unctuous medicine between them, before the patient goes to rest.

Notwithstanding what has been said respecting inflammation of the eyes resulting from a relaxation, or attended by that state of the vessels, it is sometimes owing to intenseness of motion---which is discoverable from *the great heat,---dryness, and very severe pain,---*which are concomitants ;---then bathing the eye with warm milk and water, in which poppy heads have been boiled, afterwards applying a poultice of this decoction thickened

thickened with crumbs of bread, inclosed in thin cambrick, will be necessary. But in order to prevent the accession of these complaints in those who are subject to the returns, besides guarding against the remote causes (315.) issues have been recommended---taking away blood about the equinoxes---purging occasionally---a cooling diet---avoiding reading in the night, particularly small print---or, in fine, doing any thing, that can too much fatigue the eyes.

§ 4. QUINSY.

An abbreviation of the word from the French *squinancie*, sore throat---the Greeks term it, CYNANCHE, from *kuon*, canis, a dog, and *anko*, strangulo, strangulate---because patients afflicted with this complaint were supposed, in the difficulty of perspiration, to use their tongues like a dog---and by the Latins ANGINA, from the Greek word *anko*.

This is an acute affection of the throat, divided into two species---the inflammatory, and malignant---of the first of these some authors form varieties, according to the different parts they affect.

1. TONSILLARY QUINSY.

Because it affects the membrane on the superior parts of the throat, particularly the *tonsils*, with tumor and redness.

2. TRACHEAL.

In Scotland called CROUP, because it affects the muscles of the *trachea*, or membrane covering its upper part, the windpipe; in which disease in inspiration the voice is rattling and hoarse, there is a shrill cough, with no apparent tumor, and a little difficulty of swallowing.

3. PHARYNGEAL.

Because the *pharynx*, in the lower part particularly of the fauces, is affected with redness, the swallowing is very difficult and painful, though perspiration is sufficiently easy.

4. PAROTODÆAL.

In England called MUMPS, in Scotland, BRANKS, because there

there is a considerable swelling of the parotid and maxillary glands, respiration and deglutition slightly disturbed.

All these are attended with an inflammatory fever, though the last, or the parotidæal, is of a very mild sort.

The second species is called the TONSILLARY MALIGNANT, OR ULCEROUS QUINSY, because it affects the same parts as the inflammatory tonsillary, (see above.) with tumor, redness, and with white or grey coloured sloughs, spreading and covering ulcers, attended with a nervous or putrid fever, and red efflorescences---hence styled by some the malignant scarlet fever. (288.)

Of all these we shall proceed to treat in the order they are set down---and, first,

THE TONSILLARY INFLAMMATORY QUINSY, OR COMMON SORE THROAT.

DESCRIPTION. In this the tonsils and superior part of the fauces are affected—in general the inflammation begins in one tonsil, then spreads across the palate, seizes the uvula, and other tonsil.

Though considerable pain attends the action of swallowing if only one side of the fauces is affected, yet can that action be performed tolerably well; but the pain becomes intolerably severe when both sides are affected, and swallowing is performed with extreme difficulty; indeed, the pain is sometimes so great as, in delicate and irritable habits, to occasion convulsions.

It may, however, appear singular, that more pain should be felt in swallowing liquids than solids; but this is the fact, because a greater portion of muscular fibres are employed in the deglutition of the former than the latter.

So long as the inflammation confines itself to the parts above described there is little danger, more particularly if the neck appears puffed up, for this seems to indicate less danger of suffocation, and is therefore considered a favourable omen.

But if the inflammation extends itself to the muscles of the larynx, in that degree as to impede the opening of the glottis, or superior part of the windpipe, the complaint becomes extremely precarious, because then there will be great apprehension of suffocation.

Or should the brain or lungs be affected by a translation of the morbid matter, from the one occasioning violent head-ach and strong delirium; and from the other oppression of the chest and difficulty of breathing. If to what we have here said we add the febrile symptoms which commonly attend inflammation, and the appear-

appearances in the throat, (315.) we cannot avoid distinguishing the complaints.

CAUSES. The *remote* or *inducing* are, perspiration obstructed, particularly in the neck—the admission of cold air into the fauces, especially if it rushes rapidly into the mouth, and strikes them forcibly—violent and long continued singing---shouting, or too severe exercise of the part---any acrid stimulating particles, or hard pungent bodies adhering to the parts---drinking too cold water---suppressed or impeded evacuations---or a peculiar state of the air rendering this complaint epidemical.

The *proximate* or *immediate*, similar to those of other inflammatory complaints.

CHARACTERISTIC SIGNS. Redness, tumor, heat, of the tonsils, rendering deglutition painful, attended with febrile inflammatory symptoms.

CURE. The same rules are to be observed as in other inflammations, respecting the general treatment, such as bleeding, purging, cooling, diluting medicines, and regimen. With regard to local application, it is of use to apply flupes of flannel dipped in spirits of sal ammoniac, or hartshorn, mixed with a little oil, and applied to the throat in the slighter cases---in the more severe, blisters; for these solicit the matter from the internal to the external parts.

Gargles also of sage tea and vinegar, or infusions of elder and chamomile flowers, in equal parts of water and vinegar, applying the steams of this to the throat; they are of infinite use, and give great relief, favouring the exudation and dissipation of the obstructing fluids.

After the inflammation is abated, gargles more astringent should be used, made of tincture of roses, or red port, with the vitriolic or muriatic acid, sweetened with honey---also to them may be added a small portion of alum, or weak decoctions of bark, with the acids above-mentioned, or alum; for these will give strength to the fibres, which, from over distension, have been weakened and relaxed---and, for gargling the throat, perhaps, syringes had better be made use of, both on account of ease and certainty in reaching the part affected.

By this mode the cure in common will be completed within the course of four or five days; but if within this time the inflammatory symptoms should not become milder, and the inflammation itself subside, then will little doubt remain of suppuration taking place; discoverable by the following SYMPTOMS OF ABSCESS forming: *the febrile symptoms continue though in a slighter degree, the pulse grows softer, the florid colour of the inflamed part abates,*

abates, the pain becomes more bearable, and slight shiverings come on frequently.

Here we must endeavour to promote suppuration as fast as possible, by applying maturing poultice to the throat externally; and internally, decoction of figs; or infusion of linseed should be drank very warm, and swallowed gradually; carefully, at the same time, watching for the appearance of abscess, which generally discovers itself in a few days, by a whitish tumor, and fluctuation of a fluid to the touch---should not this burst of itself in a few days, which, though, is generally the case, it should be opened as early as may be, and detergent gargles of barley-water, honey of roses, vinegar, and tincture of myrrh, may be had recourse to. (No. 93)

When the abscess is perceptible to the sight, and within the reach of external remedies, this method must be pursued; but sometimes it forms itself so low down as not to be within the reach of instruments; we must therefore wait for its bursting; and should, before this happens, the tumor be so large as to prevent swallowing, the patient must be supported by broth or milk glysters; and blisters and stimulant poultices should be applied to the throat externally, in order to solicit the morbid matter outwardly.

The consequences in these cases is very rarely fatal, when there is a suppuration; however alarming may be the appearances, or tedious the process.

But, now and then, this complaint arises from the want of proper resistance in the vessels of those parts, discoverable by the relaxed state of the solids, manifested *by weaker degrees of heat and pain, and more slight inflammatory appearances respecting the colour of the parts* as they are less red, than in the former.

In these cases copious bleeding is rarely necessary; purgatives are more to be depended upon, and the application of stimulants and blisters locally and externally---gargles should be of the pungent kind, made of the infusion of horse-radish, or mustard seed, or some other of the pungent stimulants, (145, 146.) for these attenuate the viscid mucus which clogs the follicles or cells of the tonsils, and other contiguous glandular parts, that crowd the fauces, by stimulating the vessels to an increase of proper action on their stagnating mucus; for these sore throats are considered as pituitous.

In habits like these of the phlegmatic kind, (60.) abscesses seldom arise; but should that be the case, they require the same mode of treatment as above specified; to which must be added tonic and corroborant medicines internally, as well as externally, in order to give tone and firmness to the vessels after proper de-
tergents,

tergents, and add strength to the constitution, as bark, steel, with a generous and nutritious diet.

The same mode must be pursued in the SECOND and THIRD SPECIES, in their inflammatory state; to which if the disease does not yield, and there is reason to be afraid of suffocation, from the high degree of inflammation of the muscles of the larynx, preventing proper respiration, recourse must be had to bronchotomy, or opening the windpipe, though not without extreme necessity, and then it must be performed by the hands of the most skilful surgeon, for it is attended with the utmost danger.

But sometimes the inflammation not only attacks the membrane lining the upper part of the trachea, but extends itself down on the interior surface into the lungs, which surface is found, on dissection, to be covered over, and the passage for the air almost filled up with a thick slough, having a fibrous membrane-like appearance, which is concluded to be the viscid remains of mucus thrown off by exudation from the inflamed surfaces—and is discoverable by a *peculiar shrillness of the voice, like the crowing of the cock, with a cough*, but no sickness, nor at first much difficulty of breathing.

This disease is at certain times epidemic, and seizes chiefly children, and runs to its fatal termination so extremely rapid, that little chance is given to any medical applications, from the want of time—immediate vomiting, and blistering the throat, are the whole we can, perhaps, depend upon for any the least prospect of success. This variety of the trachel quinsy is called the GROUP, and is more frequent in Scotland than elsewhere.

The FOURTH SPECIES, or the PAROTIDEAL QUINSY, or MUMPS, called also MAXILLARY, from its affecting the maxillary as well as the parotid glands, and also the muscles and ligaments which raise up and connect the upper with the lower jaw, from which is necessarily felt severe pain in opening the mouth.

In this the swelling is generally external, increasing so much in a few days, particularly in the lower part of the face, and under the chin, as almost to obliterate the features, though the attendant fever is but slight.

Saline purgatives, with nitrous medicines, moderate bleeding, and external stimulants, chiefly volatile liniments, are all that are required, keeping at the same time the head and face warm, and free from external cold.

But there is a singular peculiarity now and then attending this complaint; for sometimes on the swelling of the glands subsiding, a similar affection of the testicles of men takes place, and of the breasts in women—however, no alteration in the cure is required;

for it has been observed, that to the same it yielded, nor were the parts, particularly the testes, ever known to suppurate.

Sometimes a hardness will remain in the parotid and maxillary glands; these yield to small doses of calomel, and gentle purging; sometimes the application of the quicksilver ointment hath been necessary.

5. TONSILLARY MALIGNANT ULCEROUS SORE THROAT, (318.) OR MALIGNANT SCARLET FEVER.

This has often raged in England, and appears to be a quinsy; or sore throat, of a more malignant nature, attended with a remittent fever, verging more to the putrescent than inflammatory sort; or running very rapidly from the former into the latter.

This disease oftener attacks, and with a greater degree of violence, infants and young children than adults; girls than boys; the infirm than those in the vigour of health; those of a pale, wan complexion, and relaxed habit, with an acrimonious state of fluids, than the robust and sanguineous; and appears particularly in autumn, preceded by a hot summer.

DESCRIPTION. In its commencement, it first seizes the patient with *chillness, languor, sickness, and extreme oppression at the pit of the stomach—great dejection of spirits—very sudden weakness—great heaviness on the breast—and faintness*—these are succeeded by *extreme heat, nausea, vomiting, with soreness of the throat*—sometimes the affection of the throat makes the first appearance—in general the *pulse* is frequent, small, and fluttering, though sometimes depressed, and undulating—the *tongue* moist, especially towards the root—the *eyes* heavy, reddish, and watery—the *countenance* frequently full, flushed, and bloated, though now and then pale and sunk—the *breathing* quick and laborious—the *skin*, though extremely hot, not perfectly dry—the *urine* commonly pale, thin, and crude; in many adults, however, it will be made in small quantities, high coloured, or turbid like whey—the *throat* sore and inflamed, exhibiting a shining redness, of a deeper colour than in common inflammatory sore throats, and having a puffy appearance which covered the tonsils, and spread over the fauces, the *tonsils* at the same time ulcerated, and in some degree, though not greatly, enlarged—a *delirium* sometimes comes on in the day-time, the symptoms appearing slight; yet is there in the night a considerable increase of violence, and that through the whole course of the disease—the *swallowing* is difficult, and more so on swallowing the saliva only, than of any liquid or soft diet.

On the third day, or thereabouts, an efflorescence on the skin generally appears, but without any alleviation of the distressing
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symptoms ; indeed, they frequently increase, and, added to them there is often a *purging*—at this time the patient begins to *throw about his arms and legs*, lying in a state of great inquietude ; or he becomes *drowsy*—there now comes on *great prostration of strength*—the *constitutional powers fail*—*swallowing* grows more difficult—the *breathing* more laborious—and before the sixth day the patient expires in a state of suffocation.

CAUSES. The *remote* and *inducing*, as in all diseases arising from any specific infection, or contagion, is a predisposition in the habit to receive and feel the effects of the morbid matter, which we conceive to be of a peculiar nature capable of creating the disease, communicated from the air, or bodies before affected, which constitutes the *proximate* or *immediate* cause ; for frequently the disease, either from the breath, or contaminated matter spit up, will attack the attendants, and a whole family—a strong proof that the disease is infectious and contagious.

CHARACTERISTIC SIGNS. (See page 319.) And here it is of the utmost consequence to distinguish this from the simply inflammatory fore throat, which may be done by the looseness and vomiting—the puffy and dark-coloured redness attending the swelling—from the fœtid ulcers of the throat, covered with a white slough—from the hoarseness of the voice—the slight delirium coming on so soon—and from the sudden and great prostration of strength---because much depends upon the mode of cure first adopted---for what will be the means of laying a foundation of a cure in the simple inflammatory, would be the cause of death in the malignant quinsy.

The redness of the tumefied parts, brightness of the eyes, no great degrees of debility and fainting, the slough being white, and the florid appearance of the eruption on the skin, are favourable omens.

But if the debility should be violent ; if the ulcers are ash-coloured, black, or livid ; if there should be a diarrhœa, rigor, weak and small pulse ; the body put on a cadaverous appearance ; the eyes lose their splendour ; the eruptions disappear, or become livid ; and particularly if the nose bleeds—the worst must be expected.

CURE. The indications of cure are similar to those of putrid fever, (223, &c.) to which we must add, the healing of the ulcers.

In the most malignant kind, little can be expected from our endeavours, the progress to dissolution is so rapid.

In the more mild sort, whatever may have been said by men whose medical characters entitle them to attention, with respect to bleeding, nothing except the most distressing inflammatory symptoms, which rarely occur but at the commencement, can

authorise the practice; for I have generally observed, that those who have undergone the operation in this species of fever, ran very quickly into extreme danger, or died.

If, then, at the onset, there appears to be strong vascular action, saline mixtures, with slight antimonials, and acid gargles, slightly astringent, with occasional gentle aperients, or emollient glysters, if necessary, after the administration of a vomit, may be persisted in, till symptoms of putrescency make their appearance, which will soon be the case—then we must rely on blistering under the throat, and antiseptics, as bark, mineral acids, acceſcent drinks, and vinous cordials, for relief. SEE PUTRID FEVER, (223.) where we have treated on these remedies, except gargles, which may be made as directed No. 94.

Or the vehicle to the other ingredients may be pectoral decoction; the more antiseptic ones may be made of decoctions of bark, with tincture of myrrh, red port, and the mineral acid—some also a gargle made of honey, barley-water, and spirit of sea salt—and after the fever has remitted, drying the ulcer with quick-lime ley mixed with honey.



C H A P. II.

INFLAMMATIONS OF THE BREAST.

§ I. PLEURISY, OR INFLAMMATION OF THE PLEURA.

THIS is an affection of that membrane called PLEURA, from the Greek word *pleos*, plenus, full, which lines the inside of the chest, covering the ribs internally, and intercostal muscles (33.) and lungs, (28.) and forming the mediastinum and pericardium, (28.) attended with an acute fever, great pain, and difficulty of breathing.

It is divided into the TRUE PLEURISY, when the membrane itself is affected—into the SPURIOUS, when the intercostal muscles; and also into MOIST, when expectoration is an associate; and DRY, when there is no such appearance—indeed, at the onset it puts on generally the appearance of the latter, and of the former in its progress, if not conquered by resolution; for then most commonly expectoration takes place.

DESCRIPTION. At the commencement, the patient is generally attacked with chillness and shivering, which are succeeded by heat, restlessness, pain in the head and side, the last
very

very acute and pungent, running to the back and collar-bone—difficulty of lying on the side affected, with a dry cough, increasing the pain, which, after the third day, is attended with an expectoration of a thin, sanious, and sometimes bloody matter—the breathing is also very difficult and painful—the pulse hard and tense—the blood, when drawn, firm in its texture, and covered with a coriaceous, or substance like buff-leather—the urine very high coloured—and all the symptoms of a peripneumony, which we shall hereafter describe.

CAUSES. The *remote* or *inducing* are, obstructed or impeded perspiration—strong exercise, cold, thick, heavy air admitted into the lungs, cold northerly winds—drinking of ardent spirits—cold water drank when the body is over-heated. Sometimes it succeeds a quinsy, colic, and spasmodic pains—suppressed evacuations—eruptions repelled, as the measles and small-pox, &c.—external injuries of the chest—and, in fine, whatever will create a stimulus on the lungs possessed of an inflammatory disposition.

The *proximate* or *immediate*, an inflammation of the pleura running along the exterior surface of the lungs, or that part covering the ribs; but most frequently of *both* affected at the same time.

CHARACTERISTIC SIGNS. A pungent pain of the side, attended with febrile affections, pain also in inspiration particularly increased; a difficulty of lying down, for the most part on the side affected; and very painful cough—in the beginning dry, afterwards moist, and often bloody.

CURE. The indications are similar to those of inflammation of other parts—at the onset, we must have recourse to copious bleeding, and that repeated, if the symptoms continue urgent, according to the strength of the patient—the blood should be taken from a large orifice; and in strong full habits, and young up-grown subjects, not less than fourteen or sixteen ounces—above the part in pain cupping-glasses may be applied, and blood taken away by those means—if the pain should be relieved by the first bleeding for some hours; and, notwithstanding *that*, the pain and oppression return, the operation must be repeated, and about twelve ounces more blood taken away; and, indeed, should the symptoms prove obstinate; and return in the course of ten or twelve hours, we must have recourse to the operation again, and apply a blister over the part affected, especially if the inflammation appears to extend itself outwardly, or the pain has any great degree of severity; for, indeed, our chief dependence rests on bleeding and local blistering, to weaken the tone of the vascular system, and subdue the violence of the action of the vessels—

vessels—after the first bleeding, and in the intermediate times, such things should be administered as will co-operate to promote these intentions—we must, therefore, have recourse to such things as are diluting, relaxing, and emollient, with cooling and aperient diuretics—hence may the patient drink copiously of *pectoral decoction*, *bran or linseed tea*, *almond milk*, *apple-water*, *lemonade*; in all which portions of nitre may be dissolved; and the body should be kept open with *cooling and relaxing glysters*, (No. 25, 26.)—*a large sponge dipped in warm vinegar* applied to the mouth and nostrils is useful, as well as diluting drinks, that the vapors may be received with the air into the lungs, relax the pores of the pulmonary vesicles, promote exudation, and bring on expectoration, by unloading the distended blood-vessels, and making them permeable—or, for this purpose, the *steams of warm water*, or *some emollient decoction*, might be received into the lungs by inhaling them from the spout of a large tea-pot; or by MUDGE's inhaler, contrived for that purpose.

Emollient fomentations, or *bags filled with boiled herbs*, might be applied over the parts—*oily medicines*, forming emulsions or linctus's, (No. 81 to 84.) might be taken internally occasionally—and *nitre*, mixed with a little *camphor*, or *antimonial's*—and *saline mixtures* given every two, three, or four hours.

In the beginning of this disease, there is little doubt but this, like other inflammations, may be carried off by resolution; but if the power and strength of the vessels have been so weakened, or there has been a plentiful deposition of morbid matter upon the lungs, which has changed the nature of the pulmonary fluids, we must then endeavour to promote, by all means, expectoration, as the only remaining means of saving the patient from extreme distress, or death.

For this purpose, added to what we have above delivered, as an attenuant, *seneka*, or *rattlesnake-root*, (159.) is esteemed a powerful one, and has in these cases been attended with success, given three or four times a day; it promotes perspiration and expectoration; but when we find the latter is remiss, expectorants must be had recourse to, (No. 95.) four spoonfuls of which must be taken every third or fourth hour.

When people begin to expectorate, some authors forbid any farther use of the lancet; but so long as the violence of the symptoms go on to increase, we may pursue it to a fourth or fifth time; nay, indeed, farther, according to the strength, till we find them alleviated, and the patient perceives himself considerably relieved.

This alleviation will be perceptible on the fourth or fifth day, by the head being freer from uneasiness, the tongue more moist; the

the cough will be less troublesome; the breathing not so difficult; the expectoration more easy; the matter less tinged with blood; and by some alleviation and freedom in the pulse, which will beat more regularly, and with more quietude.

Under these circumstances, we should persist in the use of diluents and expectorants, keeping the body open with gentle cathartics, such as the electarium e cassia, oil of castor, manna, Rochelle salt, &c. (169 to 171.) or by the use of emollient glysters---desisting now from farther bleeding.

Though the disease in a few days generally terminates favourably, if the expectoration continues free and copious, yet sometimes it stops suddenly, and no other discharge succeeding, the breathing becomes difficult and laborious; we must then endeavour to renew the discharge, lest the patient should die suffocated, *by bleeding, inhaling warm steams into the lungs, the application of blisters, and antimonials*, sufficient to promote gentle vomiting.

As the mode of treatment must be similar in the simple inflammation of the lungs, heart, mediastinum, pericardium, and diaphragm, (28, 29. 33.) we shall now only describe them, to shew how they may be discovered---and, first,

§ 2. PERIPNEUMONY, so called from the Greek words *peri*, circum, about, and *pneumo*, pulmo, the lungs.

INFLAMMATION OF THE LUNGS.

DESCRIPTION. This begins with shivering or chillness, succeeded by heat—after which there comes on anxiety, debility, and restlessness, watchings, and delirium—the blood drawn is similar to that in a pleurisy—besides, there is a redness of the countenance and in the eyes—the tongue is white and dry—the respiration laborious, quick, and hot, attended with a *dull, not an acute* pain—the patient cannot lie on the side affected—there is a pain in the shoulder—dry cough at first, afterwards moist, and vomiting—the pulse is full and soft—the urine high coloured, which, after standing, sometimes becomes turbid—at length the mind is disordered—the sight fails—a kind of hissing noise attends the breathing—the pulse rather creeps than beats—the extremities grow cold—partial sweats breaks out in the superior parts—and death closes the scene.

Now this complaint is obviously distinguished from a pleurisy, *by the breath being hot, the pain dull, not acute, and the pulse also full and soft.*

CAUSES. The *remote* or *inducing*, (see page 325.) *Proximate* or *immediate*, inflammatory obstructions of the terminations of those arteries of lungs, (30.) called pulmonary and bronchial, either separately or conjointly.

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CHARACTERISTIC SIGNS. Febrile affections, attended with an obtuse pain under the breastbone, or betwixt the shoulders—anxiety, and difficulty of breathing—a cough, generally, though not always, moist—the face swelled, and of a purplish colour.

CURE. (See Pleurisy, page 326.) But here it may not be useless to observe, that there seems to be a material alteration between the termination of an inflammation of the pleura and that of the lungs—the solution of *the first* often happens by a plentiful sweat, or a copious discharge of loaded urine—*of the last*, more frequently by expectoration---and in both cases, when these evacuations of sweat, urine, or expectoration have been perfect, a full and salutary crisis is formed, all the oppressive symptoms vanish gradually, and the re-establishment of health happily succeeds.

The inflammation of the mediastinum, which is only a duplication of the pleura, manifests itself by an acute pain in the middle of the breast, between the breast-bone and the spine, or clavicles or collar-bones, attended with frequent and quick breathing, and the rest of the pleuritic symptoms.

The *inflammation of the heart, and the membrane surrounding the heart*, is accompanied with a deep-seated pain—weight, anxiety—very quick, and frequent respiration—great thirst—a heat in the chest—palpitation of the heart—with a hard and unequal pulse, and frequent fainting.

The same affection making the diaphragm, or that part of the pleura which covers it, (27.) the seat, has for its attendant symptoms, an acute fever—restlessness—anxiety—and delirium—an acute pain between the spurious or short ribs, and the vertebræ of the back places opposite to them, agreeable to its situation—the breathing is quick and short, accompanied with convulsive catchings in inspiration—a dry cough and hiccough—the hypochondrium, or part below the short ribs is drawn in towards the back, and the abdomen, or lower belly, has little or no motion during the action of breathing.

The three complaints we have now mentioned are called by systematic writers, **CARDITIS**, from *cardia*, cor, the heart—**PERICARDITIS**, from *peri*, circum, about, and *cardia*,—and **PARAPHRENITIS**, in contradistinction to *phrenitis*, or the inflammation of the brain, because, though a delirium always attends it, the brain is only sympathetically affected in this case, whilst in the **PHRENITIS** it is the seat of the disease.

With respect to the cure, we must pursue the same plan as advised in pleurisy, exerting our strongest efforts to produce resolution, the only salutary termination; for all the other either bring

bring on immediate death, or lay the foundation for some irremediable complaint, of which we shall treat, as soon as we have taken notice of another species of the peripneumony; for in this place we have confined ourselves to such as were purely inflammatory.

MALIGNANT PERIPNEUMONY.

This complaint is by far more dangerous than that we have before described—as it generally attacks those where humors are in an highly acrimonious state, scorbutic habits, and sailors alter long voyages.

DESCRIPTION. In this complaint, the blood is in a dissolved state, livid, and when drawn has no coriaceous, or leather-like appearance upon its surface, as in the inflammatory species—there is also great restlessness with extreme debility;—pains all over the body;—profuse sweats, and red, or livid eruptions, like flea-bites;—the patients are apt to faint on the least motion, have a difficulty of breathing, and cough or spit up a thin, sanious, bloody matter, which smells offensively—the pulse is soft, and depressed, and the urine very high coloured.

CURE. The fever attendant on this seems clearly to be of the putrid kind, and as such must be treated—Bleeding, therefore, must be avoided, without at the beginning the pulse should be strong, for otherwise it does great injury, particularly if it should be repeated. Blisters also are mischievous.—Our chief dependence rests upon *vegetable or mineral acids*—*camphorated vinegar*, (No. 55.) with a *nourishing and acescent diet*—*vinous liquids*, particularly such as are astringent, the best of which are rhenish, claret, and red port—*Opiates* also have been found serviceable in thickening and rendering more mild the thin, acrimonious humours deposited upon the lungs; but then they should be given with great caution, taking care not to increase the difficulty of breathing by their use.

Of the *spurious peripneumony* we shall take notice, when we come to treat on asthma; and now proceed to treat on some of the consequences of pleuritic and other inflammatory affections of the breast, forming different diseases.

For when the pleurisy, or peripneumony is not cured by resolution, or expectoration, matter is generally formed within the chest, which, according to its situation, has received different appellations; when in the body of the lungs, though no more than an abscess, it is called *VOMICA*—from *vomo*, to vomit, because they vomit forth, as it were, matter—when between the pleura, *EMPYEMA*, from *en* and *puon*, pus, matter.

1. VOMICA.

DESCRIPTION. Upon the formation of matter, which, occurs, if the inflammation goes not off within fourteen days, there is an abatement of the severity of the symptoms—the pain ceases---and the pulse, still quick, is weaker and softer; yet the cough, difficulty of breathing, and oppression still continue---and if in this situation the patient feels a slight shivering, succeeded by heat, little doubt remains of an abscess taking place;---add to this, if the cough increases upon the least motion, the patient cannot lie but on the side affected, and the symptoms grow daily more severe, accompanied with debility, and emaciation, these appearances make it more certain.---And should the vomica burst suddenly, a suffocation may be dreaded—or should the matter not find its way into the branches of the windpipe, so that it may be coughed up, and make its exit out of the habit, all hopes of success are at an end,

2. EMPYEMA.

DESCRIPTION. An increased difficulty of breathing upon the reclension of the breast, preceded by an unresolved inflammation---inability to lie on the side unaffected; a sense of weight above the diaphragm, and many symptoms common to a dropsy of the chest—because the immediate cause is a quantity of matter lodged in the cavity of the thorax, or the matter may form a sac in any of the membranes of the breast; though they commonly burst, pour out their contents into the cavity of the chest, and by pressing upon the diaphragm, or other parts, according to the position of the body, occasion the symptoms before specified.

CURE. In both these cases every prospect of success depends upon freeing the habit from the offensive matter, which, should we not be able to accomplish, either the patient will die suffocated—or consumptive. In an EMPYEMA there are no hopes, except making an aperture between the ribs into the chest, as low as possible, to avoid wounding the diaphragm.

In a VOMICA, if from the expectoration of matter we have reason to believe that it has burst into the branches of the windpipe, and the matter be white, smooth, and free from any offensive smell, and continue to be freely discharged; if all the oppressive symptoms from day to day abate, particularly the cough and laborious breathing, we must not despair of a recovery, which we must endeavour to promote by the use of expectorant balsamics conveying the steams of the ætherial spirit of vitriol—or STERNE'S æther dropt into hot water, and inhaled into the lungs, in order to cleanse and heal the ulcer.

Ground ivy, hyssop, chervil tea, whey, sweetened with honey, are proper drinks---all animal food and broths should be avoided, and their place supplied with milk---rice, spinage, turnips, or any other diluent, cooling vegetables, properly prepared: these will keep the body cool, and dispose the humours to be mild and soft---and proceed farther in the manner we have laid down in pulmonary consumption.

Sometimes matter will be so situated by being locked up in a sac, whose sides are formed so thick, that the matter cannot be absorbed into the habit, but communicating with the branches of the windpipe, be from time to time expectorated--under this circumstance men will live a long time, as I have in two instances known, where nothing was ever attempted but putting the patients on a milk diet.

Sometimes an adhesion will be formed between the membrane covering the outer surface of the lungs and the pleura which covers the inside of the ribs, forming a cavity, and points itself outwardly; or manifests itself by a constant fixed pain in some particular part---under these circumstances, when all hopes of a cure by expectoration are past the vomicae and ulcers have been conquered effectually by an aperture being made into the cyst in which the matter was lodged. Cases attending the success of this practice, with the mode of management, may be found in Dr. BARRY's treatise on the three different digestions, and discharges of the human body, to which our reader is referred.

§ 3. PULMONARY CONSUMPTION,

called PHTHISIS PULMONALIS, from the Greek word *ptthino* or *ptthuo*, corrupto, to corrupt.

This disease is a wasting away of the whole body, attended with a hectic fever, cough, and spitting up of matter, from an ulcer on the lungs.

Authors have divided them into different species; THE DRY, or TUBERCULOUS CONSUMPTION;---THE MOIST, or CATARRHAL---and THE SANGUINARY, from their attendant symptoms and causes; but by dividing this disease into two stages, and adverting to the cause, we shall, by a concise view, render it less perplexing; the FIRST, comprising its state of inflammation; the SECOND, of suppuration.

DESCRIPTION. The inflammatory stage begins with chillness, succeeded by heat, low spiritedness, and pain--shrillness of the voice, salt taste in the mouth, and dry cough--there is generally an oppression in the breast, especially after motion--thirst--

a weight in that part of the lungs affected--loss of appetite, and vomiting up sometimes of the food soon after taking it--the pulse is quick, soft, and small; sometimes full, and rather hard--and frequently a spitting and coughing up of frothy and florid blood--this forms the first species--and when blood is coughed up, the third, or sanguinary; and this by some is considered as a consumption in its incipient state.

After some time, matter is expectorated of different colours, white, yellow, green, bloody, either without smell, or offensive--the body begins to fall away, and grows cold even in summer--the hectic fever increases in the evening, and in the morning abates by dissolving sweats--there is a burning heat frequently in the palms of the hands--and in the day loosenesses come on, or the patient makes a larger quantity of water--sometimes the tongue will be beset with small ulcers--and, after eating, the patient will have a fixed red colour in his cheeks--the fingers grow thin, though the ends are bulbous, and nails curve inwardly--the feet swell--the hair falls off--and pit of the stomach seems to be pulled inwards and upwards--all the functions grow languid--the body dry--and the eyes sink deep within their cavities--at length, from debility, the patient pays the debt of nature, at the time when he is flattering himself with the hopes of a recovery.

CAUSES. The *remote* or *inducing* are, acrid matters separated by the lungs, and, by their stimulus, exciting a cough--small glandular tumors, called tubercles--fumes of arsenic, or other noxious materials, getting upon the lungs--moist air--spitting of blood--a diminution or suppression of evacuations to which the constitution is accustomed--inordinate passion--sedentary mode of life--too luxurious living--extraneous bodies getting into the lungs--wounds--retropulsion of acrimonious humours--besides, it is occasioned very often by a variety of other diseases; as scrophula, pox, small-pox, measles, scurvy, asthma, pleurisy, and peripneumonic diseases; scarlet fever, and other continued and remittent fevers; besides, it may by contagion be acquired; and is also hereditary.

The *proximate* or *immediate* is, in the *first stage*, an inflammatory state of some portions of the lungs, particularly the glandular; in the *second*, almost always ulcerations, which the opening of dead bodies who have died of this complaint verify; though sometimes the cause has been found to be, an induration and swelling of the bronchial glands, which are dispersed through the lungs, hard and black, not suppurated in the center, but running together, and firm, of the size of hazle-nuts or nutmegs, and oozing out a purulent mucus into the terminations and branches of the windpipe, not observable in the spits--some of them form
earthy

earthy concretions, do not suppurate kindly, but remain in a state of hardness, and, when cut, ooze out a thick purulent mucus, and thick black blood.

CURE. Now, whether we consider them as different species, or as different stages of the same complaint, we must adapt our mode of cure accordingly—hence, then, **IN THE FIRST STAGE**, we must endeavour to conquer the inflammation, by gentle bleeding, renewed at proper intervals, and the applications of blisters to the back and sides, frequently repeated; we should also give oleaginous and incrassating demulcents, to sheath the humours, and prevent the coughing—gentle vomits should be, after proper evacuations, repeatedly had recourse to, at least every morning, by giving a few grains of ipecacuanha, white or blue vitriol; though the first is preferable—a course of goat's whey would be useful—living upon vegetable diet, and being extremely temperate—when the inflammation abates, gentle doses of some deobstruents; such as ammoniacum, millipedes, myrrh, ammoniacal iron, &c. would be serviceable to some; to others Seltzer water; those of Moffat, Harrowgate, Kilburn, Islington, to others; using at the same time riding exercise.

Small doses of mercury have been thought efficacious in resolving the tubercles after the inflammatory stage is over, of which quicksilver with chalk, by some, has been preferred to every other composition of that class; but, whatever of them are administered, should be given in small doses, in proportion to their activity.

IN THE SECOND STAGE, the indications are, to discharge the offensive matter from the constitution by expectoration, or any other mode agreeable to nature, permitting her always to point the way; heal the ulcerations, strengthen the lungs, and give tone and firmness to the habit in general; for which purposes chalybeate waters, mineral acids, particularly elixir of vitriol, have been recommended; gentle exercise, especially riding on horseback; a clear, dry, warm air, and such amusements and company as will moderately exhilarate, not fatigue the spirits—venery, all painful mental affections, or too great solicitude about business, should be avoided.

In order to clear the lungs, and produce freedom of expectoration, we advise gentle emetics, (see above.) and sailing, for these are greatly conducive towards giving strength to the part affected—the myrrh mixture, (No. 96.) has been in many cases highly serviceable—and, in order to prevent the absorption of matter from having any bad effect upon the blood, *antiseptics*, not of the stimulating kind; and *demulcents*, with vegetable and mineral acids, should be used, if the patient has no looseness to forbid their admini-

administration—*bark* also in this point is beneficial---at the same time the patient should be kept on all such things as are cooling and nutritious, and what we comprehend under the term milk diet---and if neither riding exercise or sailing can be procured, *swinging* in the open air must be substituted in their places.

Nothing is more necessary than an exact observance of regimen in point of diet in these consumptive cases ; but of this, and other particulars, we have before spoken when on hectic fever, to the cure of which we shall refer our reader, (261, &c.) and proceed to treat on some other species of consumptions, which arise not from affections of the lungs, but from matter formed in some other of the viscera, and these are called

TABES,

from the Latin word *tabeo*, to pine away.

DESCRIPTION. Emaciation of the whole body, attended with an hectic fever, loss of strength, without much cough or spitting of matter ; and these are generally owing to formation of matter in some of the interior parts of the machine.

If it happens in the **LIVER**, it is known by pain extending itself up to the shoulders—a swelling, and pain on touching the region of the part affected—nausea, vomiting, and looseness—there is frequently a cough—the skin has a fallow or yellowish look—and the sediment in the urine is either brown or yellow.

If in the **STOMACH**, it manifests itself by fœtid offensive belchings—a cough without expectoration—a vomiting of purulent matter—fainting frequently—sweats—and pain, either during the time of swallowing, or just after.

If in the **INTESTINES**, it is discoverable from the situation of the parts, and the separation of matter by stool.

If in the **MESENTERY**, the signs are nearly similar to those which occur when in the liver, (see above) though a hectic fever, joined to a tense swelling of the belly, and a frequent diarrhœa, are distinguishing marks of this disease.

If in the **KIDNEYS**, there is a weight in the part affected, the patient lies on his belly, the urine has matter mixed with it, and there is a difficulty and pain in making water.

If of the **WOMB**, it is known by a pain of the loins, and a flow of matter externally through the vagina. (51.)

A *tabes* may also be occasioned by matter being lodged in some parts more external, where an evacuation of pus may be procured by opening the abscess ; which done, and the ulcer healed, the cure will be completed ; but where this cannot be accomplished, as is generally the case in almost all of the imposthuma-

tions

tions we have specified, we must attempt to correct the acrimonious state of fluids brought on by the absorption of matter, and guard the constitution against its effects, by the use of Peruvian bark, and such a regimen as we have before laid down in cases of consumptions from ulcers of the lungs.

Sometimes, though there will be a scirrhoty, or hardness of the parts, particularly the liver and mesentery, arising from the vessels being obstructed; to the latter of which children about seven years old, without any signs of a scrophulous taint in the habit, born of common prostitutes, are said to be the most subject—they grow pale, spiritless; have a voracious appetite, sometimes a depraved one, longing for things uncommon and improper to eat; with a relaxed state of the intestines, and a looseness, in which the food taken passes away almost in an unaltered state, soon after eating; they fall away, are consumed by a low lurking fever, and often fall into a dropsy of the belly, or a local inflammatory affection comes on, and closes the scene in death.

CURE; This, in all cases of their kind, is to be attempted, by steel medicines, or waters, goat's whey, fossil alkali, or soda, (Page 185.) or such of the mineral waters as abound with them, joined to ass' milk---deobstruent gums, particularly myrrh, ammoniacum, with soap, and preparations of steel, rhubarb, and tartarized kali, may, when opening medicines are necessary, be given; and, with the use of these, a milk diet should be persisted in, with great regularity.

Though we have said that most of these consumptions, not of the pulmonary kind, arise from formation of matter, or obstructions, there is one which deduces its origin from another cause; and this is called

TABES DORSALIS, OR THE DORSAL CONSUMPTION.

from the Latin word *dorsum*, the back; which, besides the common symptoms of a tabes, is to be distinguished by others, as a constant discharge of mucus, or seed so called, through the urethra, with frequent nocturnal emissions---difficulty of making water---costiveness---pain and weakness in the small of the back---violent and acute head-ach---with an uneasy creeping sensation down the spine from the neck to the loins---difficulty of breathing, and weariness, with an heaviness of the head, and ringing of the ears.

The general CAUSE of this complaint is, excess in libidinous indulgencies, which often ends fatally, as the unhappy victims are generally so weak as to persist in them; and, without total abstinence, the most judicious advice will be inefficacious.

CURE.

CURE. This depends upon our attempts to invigorate the system, and increase the strength and activity of the solids, by a course of ass' milk, steel waters, the cold bath, with bark, and elixir of vitriol---the patient living in a pure air, using gentle exercise, light, and moderately cordial diet, given in small quantities, such as will not be too great for the strength of the digestive powers---these applied in time---and no disease requires more early application---before the hectic fever, and violent night sweats come on, may give relief; but, after that period, there is little hope for success.

§ 4: INFLAMMATION OF THE STOMACH, OR GASTRITIS.

from the Greek word *gaster*, ventriculus, the stomach; in which case the stomach is said to be inflamed wholly, or only in part.

DESCRIPTION. In this complaint the GENERAL SYMPTOMS are, extreme anxiety---watchings---restlessness---tossing about of the body---fainting---with a *most acute fever*, soon accompanied with nervous and putrid febrile affections---the LOCAL; great thirst---difficulty of breathing---*pain in the region of the stomach---excessive heat, and a sense of burning---continued painful vomiting---hiccough, and extreme pain from throwing up of wind, and particularly after taking any sharp acrid medicines---fullness and tension of the stomach---the pulse rather hard, contracted, and frequent---with coldness of the extremities.*

CAUSES. The *remote* or *inducing* are, a prevalent predisposition in the stomach being present---bruises on the region of that organ, or wounds in the stomach itself---drinking of cold water, fermented liquors, strong acrid emetics or purgatives, or other acrid medicines thrown into the stomach---corrosive poisons---acrimonious humours generated in the blood, or repelled from the exterior parts of the machine, and thrown upon the coats of the stomach, such as that of the small-pox, miliary eruptions, gout, acrid bile, or any hard substances swallowed, and lodging in the stomach; or, in fine, any thing fixed there capable of producing strong irritation---which naturally bring on the *proximate* or *immediate cause*, inflammation.

CHARACTERISTIC SIGNS. These may be known from the *Italics* in the description.

CURE. This will in many cases depend upon adverting to the causes acting upon the stomach, and taking off that action; but if it arises only from those which commonly induce inflammation, our chief dependence must be upon copious bleeding, fomentations, cupping upon the parts, and local blistering, and keeping the body open with emollient glysters---very little
can

can be expected from internal remedies, from the propensity the stomach has to reject whatever is taken down—hence all we dare venture upon are demulcents, only moderately warm, such as solutions of gum arabic, tragacanth, or spermaceti, with nitre; to which may be added, a very small portion of camphor, and three or four drops, now and then, of the tincture of opium—nitre may also be added to the glysters, and thrown up freely into the bowels—flannels also, soaked in warm solution of nitre, may be applied as a fomentation.

But what we must most insist upon must be bleeding—nor must we be directed by the pulse, as in this case it is apt to deceive us, for it is generally small, quick, and irregular; sometimes intermittent; the operation should therefore be repeated till the pulse rises, and beats with some degree of freedom.

Indeed, if resolution is not accomplished in the very beginning, mortification will very rapidly succeed.

Suppose POISON *should be the cause*, at a very early period a quickly acting emetic should be given, such as white or blue vitriol, instantaneously, and afterwards large draughts of new milk, or fresh butter melted, and oil; these are extremely salutary; or any other sheathing liquids, drank in such quantity as to fill the whole alimentary canal, in order to guard the coats of the stomach and intestines from receiving any injury from the acrimony of the poisonous stimulus—when even arsenic has been taken, these have been found efficacious.

Should the *poisons be compounded* of any metalline substance joined with an acid, suppose corrosive sublimate, before the inflammation comes on, alkaline salt dissolved in water should be freely administered; this will disunite the compound, and render it inactive.

Admit it should be occasioned by any eruptions receding from, and thrown back into the habit from the surface, and fixing on the stomach, we should apply blisters, in order to recal to the skin the offending matter, by soliciting a more copious flow of humours there.

§ 5. INFLAMMATION OF THE INTESTINES.

called ENTERITIS, from the Greek *enteron*, intestinum, intestine.

Perhaps there is not any complaint so commonly talked of as this; yet it certainly does not occur any thing like so often as is imagined—some species of the colic is frequently, I am persuaded, mistaken for it—practice warrants me in saying thus much.

DESCRIPTION. It generally proceeds in the following manner: after the body has been costive, there comes on acute

pain, and distension of the body, particularly near the navel; the costiveness then becomes more obstinate—the patient complains of sickness, and throws wind upwards—then succeeds vomiting of the contents of the stomach, afterwards of viscid phlegm and bile—should this continue, the fæces come up, nay, even the glysters, by the mouth—there is much difficulty of breathing—an obstruction of urine—the pulse quick and small—thirst—and great debility—the pain at length ceasing, faintings, hiccough, delirium, and convulsions, close the scene in death, occasioned by a mortification having taken place.

CAUSES. Those which are *remote* or *inducing* are said to be, ruptures in the groin—worms—stimulating medicines—poisons—or too acrimonious bile—too long retention of fæces—unripe fruit—or any hard substances lodged in the intestines—an intussusception, or running in of one of the bowels into the other, and there confined by some stricture—tumors or hard swellings in the intestines or neighbouring parts.

The *proximate* or *immediate*, what occurs in other local inflammations, attended with the natural motion of the bowels, called peristaltic, inverted and turned upwards, arising from the bowels being obstructed.

CHARACTERISTIC SIGNS. Great internal pain, and foreness about the navel, so that it can scarcely bear the touch, with a distension of the belly, accompanied with thirst, heat, great prostration of strength, and a quick small pulse.

CURE. Whatever may be the cause, we must labour to bring about, as quick as possible, resolution, lest mortification should be the consequence, which may in a very short space of time succeed.

The treatment recommended in the inflammation of the stomach will be here proper; though more reliance may be placed on internal remedies, which must be calculated to gain a passage through the bowels; check the vomiting, and subdue the inflammation.

To answer the first purpose, the mildest aperients should be tried; if they avail not, those which are stronger; and should they be rejected, we may couple them with opiates; the doses should be small, and often repeated. (See No. 97 to 99.)—If liquids will not succeed, solids may supply their place, (No. 100, 101.)—or should these not answer, in conjunction with them, *suppositories*, (No. 102.) and *irritating glysters*, (No. 103.) or the use of tobacco, (155.) may be tried; or crude mercury may be taken, an ounce at a time, three or four times a day.

Should some acrimony be suspected to be the cause, the purging antimonial mixture is recommended, (No. 104.) of which
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let three or four spoonfuls be taken every second hour, till the patient vomits, and has a free passage downwards. Indeed, when every thing has been tried in vain, cold water thrown suddenly upon the feet, legs, thighs, and belly, laid bare, has succeeded.

If these remedies, added to the applications we have advised in inflammations of the stomach, do not answer our purpose, mortification will take place—and here we must be careful that we are not deceived; for people, for ten or twelve hours before their death, being freed from pain, flatter themselves with the hopes of recovery, even when the fatal scene has commenced, and they die in a few hours—but if the *pulse should be low, the countenance become pale and ghastly, and cold clammy sweats come on*, we may be certain of the dreadful event.

But, should our efforts prove successful, great care should be taken to avoid a relapse; for, unless the bowels have acquired proper strength, the malady is apt to return.

The diet therefore should be, for some time, of the lightest kind, and not flatulent—the patients should be kept quiet, free from cold, and unruffled by mental inquietude—nothing crude and difficult of digestion should be taken; nor should they use much walking exercise, or any severe motion of the body.

§ 6. INFLAMMATION OF THE LIVER,

called HEPATITIS, from the Greek *hepar*, jecur, the liver.

The liver itself may be inflamed, still manifest itself by different symptoms, which authors have thought necessary to specify, in order to avoid any errors which might occur for want of such proper distinction.

DESCRIPTION. If the inflammation happens *on the interior or concave part of the liver*, it is discoverable by a fixed obtuse pain, and weight in the right side under the short ribs, attended with heat, uneasiness about the pit of the stomach—the pulse on the attack being almost in the natural state; though afterwards much quickened—there is in the right side also a distension—the patients lose their appetite, are sick, and troubled with vomiting—the tongue becomes rough and black—they complain of pain in the stomach, have a very troublesome hiccough, and their countenance is either pale, of a citron colour, or yellow like those in the jaundice.

If it is *on the superior or convex part*, they feel an acute pain in breathing, extending either towards the throat or shoulder—the pulse is quicker—they have a dry cough—lie down with dif-

sculty on the left side—are troubled with hiccough and vomiting, and grow extremely weak.

CAUSES. The *remote* or *inducing* are, too violent and repeated shocks from vomits—hard tumors of the liver—extremely tenacious blood—too great a load of fat in the omentum or caul, (37.)—cold air, or cold liquids suddenly affecting the liver, at a time when it experiences too great a degree of heat.

Though some do not consider the complaint as originating in the liver itself, but communicated from the parts which lie contiguous to it, being thus primarily affected—to all which we may add, amongst the number of inducing causes, all such as are common to other fevers of this kind.

CHARACTERISTIC SIGNS. A tension and pain in the right side under the spurious ribs, sometimes pungent, like that of a pleurisy; sometimes more obtuse, with a sense of heat and weight—a pain at the collar-bone and top of the right shoulder—an uneasiness on lying down on the left side—a difficulty of breathing—dry cough—vomiting and hiccough—the face of a yellowish colour, accompanied with thirst and a loathing of food.

CURE. This disease in our climate is considered as rather uncommon, though, if properly treated, it rarely becomes dangerous.

In this, as in other cases of visceral inflammation, we must have recourse first to copious bleeding, nor wait to be led till it is indicated by the pulse; after this, a blister should be immediately applied over the part affected, where the pain is felt; the belly should be fomented, the legs bathed in warm water, and emollient and attenuating glysters frequently administered, (No. 25, 26.)—saline neutral mixtures, with antimonials, should be given, to which should be added as much rhubarb as will keep the body constantly soluble, (No. 8.) and when the pain and other inflammatory symptoms are perceptibly abated, mercurial purgatives, joined with antimonials, will be of the greatest advantage. (See No. 105, 106.)

These means, if early and judiciously applied, will generally conquer the inflammation—if not, an abscess of scirrhus is formed—the consequences of which are very frequently incurable tabes, jaundice, and dropsy—though there are sometimes peculiar circumstances by which the patient in cases of abscess is preserved—should the inflamed part of the liver form an adhesion with the membrane covering the inside of the right hypochondrium, or part under the spurious ribs, so that the matter confined in a sac is prevented from falling within the cavity of the belly, and pushes outwardly, occasioning a swelling which points

to the seat of the abscess, an incision made into it, sufficiently large to evacuate the whole matter, may save the life of the patient, (see page 331, &c.)—sometimes the matter formed will be thrown out of the habit by the kidneys, sometimes by the intestines; but from whatever cause matter is formed in that organ, we must wait for the operation of nature, and have recourse to such remedies as the circumstances of the case will admit, labouring chiefly to support the constitution in the manner we have before specified, when treating of consumptions from internal abscesses.

§ 7. INFLAMMATION OF THE SPLEEN.

called SPLENITIS, from the Latin word *splen*, the spleen.

This, though a case which very rarely occurs, still, in consequence of certain fevers of the remittent and intermittent class, the spleen will frequently be loaded, and remain in a hardened and indolent state—however, when it does make its attack, it puts on the following appearances:

DESCRIPTION. There is a pain, generally dull, and fixed in the left hypochondrium—also a weight attended with a remittent fever—there is generally a protuberance on that side externally, attended with a throbbing pulsatile pain—the fever, for the most part, increases every fourth day—the feet and knees grow red—the nose and ears sometimes pale, attended with a difficulty of breathing.

CAUSES. These are similar to those which induce the same affection of the liver, if we except the morbid defect of the omentum or caul.

CHARACTERISTIC SIGNS. Distension and pain of the left hypochondrium, increased on pressures, without any symptoms of an inflammatory state of the kidneys, attended with a remittent fever.

CURE. Similar to what we have delivered in cases of inflammation of the liver.

But, without much previous distress or disorder, an abscess will here sometimes be formed; which, bursting suddenly, pours its contents amongst the viscera of the belly, and in a few days destroys the unhappy patient.

§ 8. INFLAMMATION OF THE KIDNEYS, or NEPHRITIS.

so called from the Greek *nephron*, ren, the kidneys.

DESCRIPTION. Those who are seized with this complaint feel a heat and pain, and sometimes have a redness in the region
of

of the kidneys, attended with febrile affections—they complain of a numbness of the thigh and leg of that side in which the affected kidney is situated; they make water with difficulty, which is at first pale, afterwards high coloured—and complain of a painful uneasiness in sitting down or standing—they lie down with most ease on the side affected—they complain of coldness of the extremities—are sick, and vomit, and breathe with difficulty; at length, if resolution takes not place, a suppuration or mortification succeeds.

This has not unfrequently been mistaken for an inflammatory lumbago, or pain of the loins; but from which it is distinguishable; first, from the patient's being able to raise himself into an erect posture; from being bent forwards without any remarkable pain, which in the lumbago is very severe; from the pain following the course of the ureters (50.); from the difficulty of making water, and the urine being more changed, which is not the case in the lumbago.

CAUSES. The *remote* or *inducing* are, whatever causes an irritation in the kidneys, so that the blood is determined too freely and obstructed there, such as wounds and bruises---calculous concretions---food which generate flatulencies in the bowels, called colon, (43.)---heating diuretics---shaking in a carriage, or on horseback---suppressed evacuations---fullness of blood, or any strong spasmodic contractions of the kidneys themselves.

The *proximate* or *immediate* are similar to what induce other local inflammations.

CHARACTERISTIC SIGNS. Pain in the region of the kidney, often pursuing the course of the ureters—frequently making water—the urine being either pale, thin, or of a very red colour—numbness of the thigh—retraction or pain of the testicle of the same side, and vomiting.

CURE. If it proceeds from common causes, such as induce other local inflammations, the same mode must be pursued as has been repeatedly advised in the foregoing part of this work.

But suppurations are often formed here, which are discoverable, notwithstanding the abatement of the pain, by a sense of weight perceptible about the region of the loins, with hot and cold fits succeeding each other, and the urine, from being high coloured, without sediment, becoming whitish and turbid—under this circumstance people will live many years, from there being so free an exit for the matter out of the machine by the ureters—however, in ulcerated kidneys, goat's whey, balsam of copaiva, (P. 165.) Canada balsam, (P. 175.) and also fossil alkaline waters are recommended—solutions of kali impregnated with fixable air, (P. 199.)---demulcents, (P. 187.)---the leaves
of

of the bear's wortle berry, (P. 139.) in powder, have been highly recommended in these cases; and, from experience I speak, much may be done by its use.

But those calculous concretions, called stone, or gravel, are the most frequent source of inflammation in the kidneys---this cause is discoverable by the pain increasing, and being more acute from exercise, or riding in a carriage---being more violent at intervals---from the urine being sometimes gravelly, bloody, or mucous---the numbness of the thigh---retraction of the testicle on the side affected---pain following the course of the ureters---as well as nausea and vomiting being more violent---The indication of cure in this case is, not only to take off the inflammation, but to procure a passage for the offending materials, whether gravel or calculus, by relaxing the parts, that it may slip away, and be evacuated.

Here then, besides bleeding, warm bathing is essentially necessary; fomentations copious use of demulcents, (P. 187.) particularly the internal emollients, (P. 142.) oily emulsions and draughts, (No. 81, 98, 99.) emollient glysters, with turpentine and opium, (No. 116. 121.) diluent mucilaginous liquids sweetened with honey, as bran tea, linseed tea, decoction of marshmallows, or that of barley, in which last is dissolved gum arabic, or gum tragacanth.

Nitrous medicines joined with the same gums may be administered, and opiates in small doses.

By these means the ureters will be relaxed, and sheathed, for the easy and quick passage of the calculus, or gravel, into the bladder---besides, the irritation on the parts will be lessened, as they will become less susceptible of the stimulus.

Should the stone be small enough to pass into the bladder, and be evacuated, the complaint ceases---if not, a different one commences, which we shall treat of hereafter.

§ 9. INFLAMMATION OF THE BLADDER, OR CYSTITIS.

from the Greek word *kystis*, vesica, the bladder.

DESCRIPTION. In this complaint, the patient experiences *a pain and tumor of the lower part of the belly---a frequent desire, and difficulty in making water---sometimes a suppression of urine---and frequent efforts to go to stool*, attended with *febrile affections*---to which we may add, the pain on touching is intolerable---watchings, thirst, and delirium, with coldness of the extremities come on---and, by retention of the urine, an increased hardness of the tumor.

CAUSES. The *remote* and *inducing* are, urinous acrimony
concur-

concurring with fullness of blood--an acrid state of fluids--inflammation of the urethra, from venereal ulcers or acrid injections--inflammation of the rectum--suppressed piles--taking Spanish flies in too large quantities--in which, besides the difficulty of making water, or severe strangury, bloody urine will be voided, and a priapism occasioned, sometimes bringing on convulsions--or it may originate from blows, bruises, compression, hard riding, or, indeed, from the stimulus of a stone in the bladder.

CURE. From whatever cause it proceeds, it must be cured, consistently with the plan laid down in inflammation of the kidneys; only, in this case, greater benefit may be derived from fomentations and vapour applied to the parts affected.

There are also inflammations of some other parts of the lower belly as the peritoneum, that membrane lining the lower belly as the pleura does the chest---omentum, or caul, (P. 37.) mesentery, (P. 46.) which, as they all of them require the same mode of treatment, we shall particularize only those symptoms by which they are said to be distinguishable.

THE INFLAMMATION OF THE PERITONEUM, OR PERITONITIS.

so called from peritoneum—is discoverable by a pain of the lower belly, which is increased by the body being in an erect posture, attended with fever; though not accompanied with signs peculiar to other abdominal inflammations.

INFLAMMATION OF THE OMENTUM, OR CAUL, NAMED OMETITIS.

This is distinguished by an acute darting pain, perceptible, through the superior and middle part of the lower belly, below the skin, muscles, and membrane of the abdomen, increased upon pressure, with swelling and tension, accompanied by an inflammatory fever.

INFLAMMATION OF THE MESENTERY, OR MESENTERITIS.

In this there is a tumor and deep-seated pain in the region of the navel, or thereabouts---the habit is altogether colicive, or nearly so---from the administration of glysters, after the first, not any thing is evacuated---the fever is sometimes slight, sometimes remittent, at others violent---the urine high coloured---there is a bitter taste in the mouth---loss of appetite, thirst, and watchings

watchings come on---afterwards a thin, red, fœtid, or white matter passes off by stool.

THE MUSCLES OF THE LOWER BELLY WILL BE SOMETIMES INFLAMED, and from thence the liver compressed--which physicians have sometimes mistaken for an inflammation of the liver---but which is easily discoverable, from touching the skin, pulsation of the tumor, and circumscribed figure, extending itself beyond the limits of the liver, and above the ribs---from the absence of cough, difficulty of breathing, vomiting, and hiccough---matter here forming between the muscle of the abdomen and the membrane which lines the inside of that cavity, has been mistaken for an affection of the liver itself---therefore necessary to be specified.

CURE. In all these cases we must have recourse to the same methods as have been repeatedly pointed out in local inflammations, to prevent suppuration---which, if we cannot effect, a tabes will be the consequence, particularly in the three first mentioned—but we must here observe, that in cases of INFLAMMATION OF THE PERITONEUM, or THAT OF THE MUSCLES OF THE ABDOMEN, we must depend much on fomentations—applying after each operation, volatile liniment, with tincture of opium, (No. 107.)—and should not these succeed, blisters—which in the others may be useful—and *in all*, repeated glysters; for these act also as fomentations, and in most apply closer to the part affected.



SECTION XIV.

ON DISEASES WHERE PAIN IS THE CHARACTERISTIC SYMPTOM.

WE consider pain as arising from four different causes, either from nervous incitability, (P. 27.) vascular or muscular irritability, (P. 27.) distension, or spasm, creating stimulus; and when it is so oppressive as to become the most violent symptom, being of long duration, or frequently returning, it constitutes diseases of this class—which take their names either from the cause known, or supposed to be the agent, or from the seat of the affection.—Yet we mean not here to include all diseases which have pain for their associate, because it is attendant on all inflammations, settled fevers, remarkable evacuations, and evident spasms; but confine ourselves to those diseases where

pain is the predominant symptom, unaccompanied primarily with any of the above-mentioned disorders.



C H A P. I.

§ 1. HEAD-ACH.

IN this complaint, it will be sufficient to enumerate the causes; because it requires not any particular description; and, according to the cause, to that is the cure adapted—but first we must observe, that it has been divided into three species, the two first agreeable to the nature of the affection; the last to its seat.

If there is a heaviness and uneasy dull sensation, occasioning a pain in the head, as if it was too full, internally distended, and overloaded, it is denominated *CEPHALALGIA*, from *kephalos*, caput, the head, and *algos*, dolor, pain;—and, by way of distinction, *CEPHALÆA*, if the whole head should not only be affected, but the pain be acute and violent, having severe exacerbations, or increase of severity on slight occasions, with spasmodic tension, and soreness of the integuments.

And should the pain attack either side of the head, chiefly at the temples, forehead near the eyes, and that should be violent, and often periodical, it is called *HEMICRANIA*, from *emisus*, dimidium, half, and *kranon*, caput the head.

CAUSES. 1st, A too great fullness of blood—2d, suppression or retrocession of the menses or piles—3d, morbid particles occasioning intermittents—4th, from a load on the stomach, and indigestion—5th, different species of acrimony; as that of the pox, gout, rheumatism—6th, hysteric spasms—and, 7th, from latent causes undiscoverable, or irremediable when known—to each of which in our mode of cure we must particularly advert.

If it deduces its origin from the **FIRST**—a full slow pulse—florid countenance; though oftener pale—load and heaviness of the head, particularly of the fore part, immediately after rising in the morning, or stooping to the ground—difficulty of thinking, of distinctly reasoning, and defect of memory, distinguish this.

Bleeding and purgatives will generally afford relief; if not, cupping at the nape of the neck, or back part of the head, may be had recourse to.

If from the SECOND, bleeding during the fit will be necessary, and attempting to reproduce the periodic discharge, and solicit the renewal of the piles---bleeding in the feet in the former, and at the anus with leeches in the latter, may be attended with agreeable consequences.

If from the THIRD, and it puts on intermittent appearances, bark alone, or coupled with valerian, (150. 193, 194.) (No. 32.) becomes efficacious, and giving emetics, (No. 11. 12, 38.) at proper intervals.

If from the FOURTH, it will be attended with throwing up of wind---nausea---load and pain in the stomach---a bad taste in the mouth---and vomiting; though this last will also attend both cephalalgia and hemicrania, (346.) without the origin of these diseases being in the stomach, but in the head only; hence we should be careful in making this proper distinction.

Therefore, if it is owing to the stomach, we must apply to emetics, (No. 11, 12. 38.) should not any thing in the constitution prohibit their use; and afterwards to purgatives; taking care previously, if necessary, to empty the vessels of the head by bleeding; afterwards bitters and chalybeates, (No. 61 to 65.) to strengthen the stomach—we must also assiduously prevent costiveness, with proper aperients taken occasionally. (No. 66, 108. 109.)

If from the FIFTH, we must proceed to attack the diseases from whence they originate, as under these circumstances they are only considered symptomatic.

If from the SIXTH, or those called nervous headaches, penetrating, volatile, antispasmodic substances externally and locally applied, such as WARD's essence, æther, compound spirit of ammonia, camphor, will sometimes give immediate relief—plaisters also made of opium, applied to the part affected, in periodical partial affections of the head, I have known efficacious.

If from the SEVENTH, we shall be convinced how impossible the causes are to be discovered, and how little is to be done, if we only mention what has appeared on dissection of those who have laboured under this complaint.

In some the *sutures of the skull* were so closely and firmly conjoined, that no traces of the junction of the bones of the cranium were to be found—in some the *dura mater* (26.) was thickened and indurated, and in others it held earthy concretions—the *skull*, in some, *sent out little processes*, like thorns, running through the membranes into the brain—and, in others, *crude quicksilver* was found in the ventricles of the brain, (27.) at the basis of the skull.

Some periodic headaches, from such latent causes, will continue

for a long series of years, without any fatal effects ; whilst others, if they are constant and violent, terminate in apoplexies, some kinds of bad fevers, or spasmodic diseases.

Some general rules, however, are necessary to be observed, whatever may be the precise nature of the affection.

Patients subject to these complaints should always keep their hands, arms, legs, and feet warm, particularly their legs, and have them well rubbed at bed-time—avoid costiveness—eat very light suppers—lie with their heads high, and in thin night-caps—their food should be always light, and easy of digestion—their exercise moderate—and their minds kept in a state of cheerful ease.

§ 2. EAR-ACH, OR OTALGIA.

from *ous*, auris, the ear, and *algos*, dolor, pain.

We have before spoken of the inflammation of the ear, § 2. in *inflammatory complaints* ; but there are other causes which induce this complaint ; as, 1st, *worms*, supposed to arise from the eggs of the flesh-fly deposited in the wax, which form for them a nest—2d, *a defluxion of humours*—3d, *from hard bodies pushed into the ear*.

In the *first* instance, smoke of tobacco poured into the ear, and afterwards warm oil, prove efficacious.

In the *second*, the symptoms are not violent—there are pain and swelling in the vicinity of the ear—running at the nose—cough—but oftener a soreness of the throat—frequent sounds and ringing of the ears—with painful sensations from those which come externally.

This complaint is apt to be occasioned by cold itself, or moist cold winds striking the ears and head, exposed to them without covering.

Local bleeding behind the ears with leeches, and blistering there, or the back part of the head, and, at the same time, the liniment, (No. 110.) may be dropt into the ear ; sedative fomentations, (No. 111.) are useful, with sedatives and diaphoretics, (No. 4 to 10.) given internally.

In the *third*, the bodies must be extracted in the gentlest manner. We have an account of acute pains, attended with other melancholy circumstances, by FABRICIUS HILDANUS, occasioned by a ball of glass falling into the ear, and continuing for eight years, cured by extraction.

And we are also told, that some surgeons, mistaking a swelling of the bony part of the ear for some extraneous body, destroyed the patient, by the violence exerted for its extraction.

These

These cases shew the necessity of caution and circumspection, even in cases considered in themselves as trivial.

§ 3. TOOTH-ACH, OR ODONTALGIA,

from *odous*, dens, a tooth, and *algos*, dolor, pain.

This complaint is known by a throbbing, gnawing, darting, or some other species of pain in the teeth, attended with watchings; sometimes with a swelling of the cheek, great discharges of saliva from the mouth, &c.

Its seat is supposed to be the nerve creeping over the internal, sometimes the external, membranous covering of the tooth.

CAUSES. 1st, Caries, or decay of the tooth or teeth affected—2d, an acrid defluxion, or flux of acrimonious humours, as of the scurvy, rheumatism, gout, from the obstructed perspiration—3d, nervous or hysteric affections—and, 4th, pregnancy.

If it arises from the FIRST cause, it is generally perceptible to the sight—the caries though sometimes lurks between the teeth—sometimes begins internally, sometimes externally—however, when it is not perceptible to the eye, it may be discovered by the tooth being almost pellucid like pearl—or by the shock of some metallic instrument, which increases, or renews the pain—by a foetid breath—a sharp darting pain from cold water, or cold air received into the mouth—from a gnawing pain—from the obstinacy of the disease, without any considerable tumor of the gums—from fistulous ulcerous gums, having a small circular tumour round the orifice, and a purulent discharge—from rotten teeth, ulcerations have been formed, and swelling on the chin, and about the cheeks, which are never cured without drawing the tooth.

CURE. Drawing is the first remedy—though, if at the beginning a small speck or portion should be perceived discoloured, that should be immediately taken off, by which its progress would be stopped—applying oil of vitriol to the part affected, or muriatic acid, and neutralizing it with kali prepared, and then filling the hollow tooth with lead, or gum mastich, has been successful—a pill of opium and camphor, or of opium and calcined quicksilver—burning the part affected with a hot iron—cauterizing the ear—applying oil of cloves or cinnamon with lint to the rotten cavity, have been recommended; if this disease returns from slight causes, and many of the teeth are in a state of decay, experience approves of washing the mouth every morning with warm urine—though indelicate, this remedy has it advocates—perhaps, using in the same manner lavender-water, spirits of wine, or brandy, properly diluted, may be considered as good a preservative.

If from the **SECOND**, it may be discovered by the teeth being in a sound state---by the pain not confined to one or two teeth, but the whole jaw of that side being affected; and by the swelling of the gums, attended most commonly with a copious discharge of saliva.

CURE. The gums in the beginning should be scarified, or leeches applied; also mustard plasters behind the ears, long enough to occasion a redness---or, in more obstinate cases, blisters---the mouth should be washed with warm milk and water---and internally, diaphoretics, coupled with sedatives, (No. 4 to 10.) should be given; smoking tobacco, chewing pellitory of Spain, ginger, sweet reed, pepper, &c. to cause a flux of saliva; applications of warm resinous plasters, (No. 112.) with opium to the temples should be administered; flannels impregnated with the fumes of frankincense, amber, sugar, &c. applied warm to the cheek, and the mouth washed with spirits of wine and camphor.

If by these means the disease is not conquered, which generally happens to be the case, but the pains persist, and the gums increase to swell, an abscess will be most likely the consequence; under these circumstances a roasted fig should be kept upon the part to promote suppuration, which once accomplished, must at a proper time be opened, cleansed, and healed, by the applications of pledgets, dipped in a mixture of honey of roses and tincture of myrrh.

If from a defluxion of any specific humour, we must proceed as in the ear-ach (348-) from similar causes, making use of those applications calculated to alleviate the local affections.

If from the **THIRD**, it generally yields to a course of antispasmodic and sedative medicines, such as we find advised in hysterical affections.

If from the **FOURTH**, there is no remedy, particularly in habits full of blood, so efficacious as bleeding.

§ 4. PAINS IN THE SIDE, OR PLEURODYNES,

from the Greek words *pleuron*, pleura, and *odune*, dolor, pain.

DESCRIPTION. This disease consists of pungent pain affecting the chest on one side, attended with difficulty of breathing, but without any acute fever, by which it is distinguished from pleurisy.

CAUSES. 1st, Too great fullness---2^d, worms---3^d, spasms---4th, adhesions---and 5th, flatulence; to the cure of which must our remedies be adapted.

If it arises from the **FIRST**, it may be discovered by the pain not being deeply seated, but affecting only the intercostal muscles,

cles, (P. 33.) the difficulty of breathing unattended with oppression; though accompanied with a cough, still the pulse is unaltered, nor is there any febrile heat; it generally originates from catching cold, or an obstruction of the menses.

CURE. This Nature often performs by a return of the menses, and indeed it will in healthful habits precede their appearance.

If from the **FIRST**, thin spare diet, gentle diaphoretics, (No. 1. 6 to 10.) and bleeding, are highly serviceable; volatile liniments, (No. 107.) mustard plaisters; warm flannels impregnated with aromatics, or warm water; bags of hot salt, or bladders, applied to the side, will expedite the cure---but should they fail, local bleeding, by cupping, and blisters to the part affected, we must call in aid.

If from the **SECOND**, there generally attends an erratic fever, but not of the inflammatory class---with a dry cough, pleuritic pain of the side; and worms are sometimes evacuated---in the breath there is a particular offensive smell---but these happen chiefly in infants.

CURE. Though one bleeding may be sometimes necessary, if the fever runs high, to abate its violence, yet the chief dependence is on cathartics, (P. 171, 172, 173.) emetics, (No. 11, 12, 38.) and vermifuges, (197.)---the purgatives though should be of the milder class.

If from the **THIRD**, it generally proceeds from severe exercise, or strains; and is muscular---for pains in the breast from such causes are attended with such sensibility of the part affected, that it cannot bear the touch, and feels as if the part had been bruised.---This though is seldom attended with a cough.

CURE. Bleeding---with emollient fomentations, (No. 111.) oily liniments, (No. 107.) and gentle purging, (No. 3. 19 to 24.)

If from the **FOURTH**, as it proceeds from the lungs adhering to the pleura, occasioned by preceding inflammation, it is often attended with a dry cough; sometimes with bloody spits; febrile affections coming on after eating, without sweating; but with difficulty and shortness of breathing; great uneasiness in lying on the side affected, and pleuritic blood.

CURE. The cause is irremediable, alleviation of the oppressive symptoms is all for which we can hope,—and this must be attended by bleeding, diluent drinks, oily emulsions, or liniments, (No. 81 to 84.) emollient decoctions, (142.) gentle sedatives and diaphoretics, (No. 4 to 10.) nitrous medicines, (No. 2.) and a thin, spare diet—and all such remedies as take off fulness from the vessels, and render the circulating fluids thin.

If from the **FIFTH**, the pain in the side is sudden, and acute, soon

soon vanishes, and resembles the cramp; though sometimes it will be so violent for some minutes as to become intolerable; the pulse is small and slow; there is no cough; but the pain is so troublesome that it impedes the breathing. This most commonly arises from cold, and chiefly affects the melancholy, hypochondriacal, and those who devote themselves to study.

CURE. Warm flannels, bladders filled with warm water, or bags of hot salt generally remove the complaint; and it will now and then be necessary to give some nervous tincture, (149, 150.)

But these pains, or stitches, have generally indigestion for their cause; therefore, to prevent their return, we must proceed in the same manner as we advise for assisting the digestive organs in preserving their functions, see *Dyspepsy*, and increasing their power; in order to prevent an accumulation of offensive matter in the first passages; or crude chyle from being thrown into the mass of circulating fluids.

If pains of the side should arise from the action of any specific acrimony—we must proceed as before directed, (556.)

§ 5. PAINS OF THE STOMACH, CALLED GASTRODYNIA.

from *gaster*, ventriculus, the stomach, and *onunc*, dolor, pain.

These, according to the peculiarity of the affections, have been differently denominated.

When there is an acute and constant pain in the region of the stomach, unattended with fainting, as in the *CARDIALGIA*, or fever as in the *GASTRITIS*, (336.) often attended with a swelling in the stomach, it is called *GASTRODYNIA*.

When there is an uneasy sensation belonging to the stomach, or epigastric region, attended with a degree of faintness, as if a swooning would come on, *CARDIALGIA*, from *cardia*, os ventriculi, the mouth of the stomach, and *algos*, dolor, pain—for this is supposed to be an affection of the upper orifice of the stomach.

When the principal symptom is a sense of heat in the stomach and gullet, which sometimes arises into the fauces, unattended with any acute fever, *PYROSIS*, *heart-burn*, from *pur*, ignis, fire, or its effect, heat.

However, we think in a practical view, they may all come under one head, particularly as the modes of treatment depend upon the specific causes from whence they proceed—we should say therefore,

PAIN OF THE STOMACH, OR GASTRODYNIA, is discoverable by an acute and constant pain, unattended with any febrile affections—sometimes associated with a propensity to faintings,
at

at others with a sense of heat there, and in the gullet arising now and then to the fauces—then called *heart-burn*, and not unfrequently with a considerable discharge of saliva from the mouth—then styled *WATER BRASH*, or *BLACK WATER*.

CAUSES. 1st, Foulness from indigestion—2d, flatulence—3d, bile—4th, poisons—5th, hard substances taken into the stomach—6th, inflexion of the lower part of the breast-bone, (called *xyphoid*, or *ensiform cartilage*, from its being pointed like a sword)—7th, gout, worms—8th, debility, ulcers, or excoriations.

CURE. From considering the causes in the first five, the indications are very nearly similar, except in the flatulent, to evacuate the contents, and so to invigorate the stomach and intestines, that digestion not only may be properly promoted, but the remains, or what is indigestible, may be carried out of the machine regularly by the increased power of the intestines.

If, therefore, it arises from foulness of the stomach occasioned by indigestion, which passes not off soon by vomiting, or purging, but continues, the orifices of the stomach will be contracted, and pressing upon its contents, occasion severe pain, with a sense of weight, restraining free respiration; sometimes the pulse will be hard and quick; at others depressed, and slow—this will be the case where the complaint is recent, and proceeds merely from indigestion, and matter which the stomach contains being in a crude state only; but if it is *viscid*, *acrid*, *bilious*, *putrid*, or *rancid*, there will be a disagreeable taste on the palate—foul tongue—unpleasant eructations, added to the uneasiness at the stomach, nausea, and load in the region above the navel, with a loss of appetite; besides, if the matter is acrid, there will be a heat in the stomach, the nature of which will be denoted by a taste in the mouth if any thing is thrown up, whether *acid*, *salt*, *bitter*, *rancid*, or *oily*;—in cases where the matter is *merely viscid*, there is a kind of watery insipid taste in the mouth only.

Which ever of these causes are prevalent, if the habit is costive, I clear the first passages with some opening medicine, (No. 108, 109.)

Afterwards wash the stomach well with warm water and oil—chamomile flower tea drank plentifully—or stimulate the top of the gullet with a feather, or prescribe an emetic, (No. 11, 12. 38.)—if great expedition is requisite, a few grains of white or blue vitriol, (No. 259.) should the cause be mere load from indigestion; these will be sufficient, giving for a little time a few drops of elixir of vitriol in cinnamon tea twice a day; but should this circumstance often occur, from the debility of the coats of the stomach, I have recourse to bitter stimulants and chalybeates, (No.

61 to 65.) and recommend riding exercise, or sailing—also the use of some chalybeate water, particularly those of Bath, which contribute much to invigorate the tone of the stomach—but should the offending cause consist in the quality of the offending matter, such things must be prescribed as counteract their properties.

If it is of an *acid nature*, magnesia, absorbent earths, alkalines, or those medicines termed antacids, may be applied to (191)—if *acrid*, the stomach should be well washed with weak chicken broth, or warm water alone; then gentle aperients should be given, (No. 3. 22 to 24.) and occasionally persisted in.

If merely *viscid*, saponaceous medicines, (No. 109.) are useful.

If rancid, or putrid, the antalkalines, particularly the mineral acids, (190.)

And in all these cases the stomach should be invigorated with stimulant bitters, &c. advised (353.) and such mode of living prescribed as will prevent the generation of these offensive materials; avoiding such viands as are apt to turn acid, alkaline, viscid, or rancid; and perhaps the only thing we can depend upon for completing the cure, is a course of such mineral waters as upon trial best suit the constitution, which can only from experiment be ascertained.

If the complaints arise from flatulence, it is caused by wind distending the stomach, and throwing its orifices into a contracted state, hence there is a violent tensive pain at the pit of the stomach, with difficulty of breathing;—the pulse grows small and depressed—the extremities are cold, with great anxiety—and the body is often solicited to bend forwards, to promote the emission of wind; which always brings some alleviation—in this case *the region above the navel can bear pressure with the hand*, which it cannot do in inflammation of the stomach, nor pain from some other causes.

CURE. In full sanguinary habits bleeding is adviseable;—and to remove costiveness glysters, (No. 25, 26.) which is very often an attendant; notwithstanding which, should it continue, opiates (No. 113.) are requisite; though, in slight cases, peppermint water will be sufficient—till the pain has totally ceased for a day or two, cathartics, even the milder ones, should be avoided. In order to prevent its return, the patient should abstain from all food difficult of digestion; all crude, flatulent, or leguminous vegetables;—the body should be kept open, and a course of bitters and chalybeates be persisted in for some time.

If from *acrid bile* the pain is extremely acute, accompanied with vomiting of green materials like a leak, or verdigrease—
sometimes

sometimes yellow, with such tenderness above the navel, that the part cannot bear the least pressure—there is extreme debility, with great dejection of spirits; indeed the pain is sometimes so acute as to bring on convulsions.

We must proceed as recommended (353) where acrid materials were the cause; afterwards, when the stomach is perfectly cleansed, opiates must be taken internally, (152.) or by way of glyster; and perhaps it may first be necessary to premise bleeding, if the pain is extremely acute, to prevent inflammation.—The bilious colic seems to have the same origin, the seat of the affection only differing—to that, therefore, we must refer.

In case of poison being the cause, we must proceed in the same manner as in inflammation of the stomach from the same sources—in gout or worms—such remedies are serviceable as are advised in those particular diseases.

If from *debility*, we must proceed as directed (353:)

If from *extraneous bodies*, which are small, and blunt, we must have recourse to emetics—if long and pointed, the stomach should be kept distended with materials of the demulcent class, so that an opportunity may be given for them to pass through the lower orifice of the stomach, and along the course of the intestines; for if emetics are had recourse to, there is great danger of their getting across the upper orifice, or sticking in the passage, and most probably terminating fatally.

If from *the inflexion of the lower part of the breast-bone*, there is a constant pain of the stomach, attended with vomiting, loss of appetite; and from a continuance of the disease, a consumption, called ATROPHY—the food and liquids are immediately rejected as soon as taken, and the pain continues to torment the unhappy patient for years.

Cupping-glasses applied to the region above the navel, and afterwards an astringent plaister, have been advised.

A reduction of it, by the manual operation of a skilful surgeon, has been asserted by BONETUS—as for my own part, palliative remedies I think the only things to be depended upon—the utility of which I have experienced. Keeping the stomach as empty as possible, eating small portions of the most easily digestible food, often in the day—refraining from all which are flatulent—taking very moderate exercise—avoiding costiveness, and, in fine, so conducting the patient, that the stomach shall be but slightly distended, is all that can be done in this case.

If from *excoriations, or ulcerations of the stomach, or its lower orifice*, it is the most obstinate and dreadful, for this may continue for many years—this is known by extreme increase of heat and pain on taking any thing acrid or hot—vomits here may be-

come detrimental, and dangerous in the extreme—in this case nothing can be done but giving all those things which are soft, mild, and sheathing: and what bids fairest for relief is living solely upon a milk diet.

Besides what we have here enumerated, the heart-burn will be attended sometimes with an efflux of clear lymph like saliva, sometimes tasteless, sometimes acrid like the taste of lime, and comes up at intervals in considerable quantity. This arises from a spasmodic contraction of the stomach, and increased action of vessels which secrete the thin fluids of the stomach and salivary glands, (20)

In this case, the rough acerb fruits and warming vegetables may be useful, as horse-radish, mustard, quince, sloes, medlars, &c.—watery fruits and vegetables should be particularly avoided, as cherries, cucumbers, melons, and such like; and astringents slightly cordial, (No. 61 to 65.) exhibited.

§ 6. COLIC—COLICA,

so called from the colon, (43.) one of the intestines, being considered as the seat of this complaint.

DESCRIPTION IN GENERAL. This is a painful complaint of the intestines, originating from a constriction, or obstruction in some part, or parts of them, brought on by some internal stimulus, attended with an acute burning pain of the abdomen, particularly running round the navel, difficulty of breathing, heart-burn, nausea, or vomiting of a bilious or viscid matter, costiveness, the appetite and digestion weakened---a distension and inflation of the lower belly---thirst---high-coloured, or yellow urine, often an obstruction in making water---hiccough---fainting---delirium---convulsions, a rupture of the intestines, or mortification.

CAUSES. The *remote* or *inducing* are, spasmodic affections, or biliary concretions, stopping the ductus communis choledochus, (36)---acrid bile---different kinds of foul offensive materials in the bowels---hardened faeces---worms---ruptures---remains of solid food---earthy or stony concretions lodged in the intestines---compression of them formed in any of the contiguous viscera---intorsusception, or the running of one intestine into another, and there confined by some stricture---a thickening of the coats by scirrhus, cancer, &c.---particles of lead---unripe acid wines---or drinking too freely of things acerbly acid---or, in fine, whatever is possessed of the power of inducing the

CAUSE, proximate or immediate; which is a constriction or obstruction in some part or parts of the alimentary canal, commonly

monly the upper or lower orifice of the stomach, the lower portion of the duodenum, (42.) at the valve of the colon, (43.) and at its flexure which it turns up under the short ribs on the left side, (43.)

CHARACTERISTIC SIGNS. Pain of the abdomen, or lower belly, running round the navel, attended with vomiting and costiveness.

CURE. The indications are, a removal of the constricting or obstructing cause, by taking off the spasms, and evacuating the irritating matter, from whence they deduce their origin.

We have before treated of the inflammation of the bowels, between which, and the colic attended with local inflammatory symptoms, some make a distinction; this may be systematically right, but cannot be of any practical utility; for the mode of cure must obviously be the same---though we must observe, that the colic with any acute fever, or quick pulse, heat of the whole body, sweat, &c. appears only to be a slight inflammation of the intestines from some local cause, not producing general inflammatory symptoms.

But the colic pain will sometimes be attended with great degree of flatulence, from the air in the bowels being rarefied, and expanding itself---hence pain, distension, costiveness, and rolling of wind in the lower belly---if the constriction of the bowels continue long, their motion downwards, called peristaltic, will be inverted, and vomiting the consequence.

That it is from wind which occasions the strongest symptom, is very obvious, by the alleviation from pain by the discharge of it downwards; from the pain pursuing the whole tract of the colon, (43.) or running round the lower belly, appearing also to affect the stomach; but that affection subsiding by the passing down of wind, or its change of situation; on pressure by being mitigated rather than increased; and by not being attended by any remarkable thirst, or alteration of the pulse.

At other times, it will have for its associate bilious vomiting, which is difficult to restrain; the patient will also have sometimes a number of bilious stools---when vomiting of green-coloured matter is the leading symptom, these attend heart-burn, loathing of food, hoarseness, hiccough, heat, thirst, and bitterness of the mouth---the urine is high-coloured, and made in small quantity.

When *bilious stools*, the pain attendant generally affects the whole intestines, particularly the duodenum, (42.)---the lower belly is neither tense nor hot, as in inflammation of the bowels---the patient is affected with giddiness---the pulse is quick, though

though neither hard nor tense---and this disease is often succeeded by the jaundice.

In all these complaints, where the pain is very acute, bleeding should be had recourse to, though no inflammation should actually exist, in full habits particularly, very early to prevent that symptom supervening.—Emollient oily glysters, (No. 25, 26.) warm fomentations, friction, and chamomile tea, in slight and common cases, will subdue the complaint—but when more obstinate, chicken water should be drank plentifully ; then glysters thrown up occasionally, and repeated—if the first does not answer, a second stronger, (No. 114.)—should these be inefficacious, oily purgatives may be tried alone, (No. 66, 99.) or mixed with Rochelle salt, and continued till a free evacuation is produced—castor oil is the most efficacious, as it often alleviates pain before it procures any evacuation, which it also does very quickly.

Sometimes liquids will be rejected, purgatives then in a solid form must be tried, (No. 115.) and continued every hour till the wished-for effect occurs—but should the attendant pain be extremely severe, with cathartics we may couple opiates ; or sedative medicines may be given first, and a small time afterwards, purgatives—by these means sometimes the gentler purgatives will answer every purpose—bags filled with salt, oats, boiled bran, or water made hot, may be applied to the belly.

But should there be any suspicion of inflammation, the stronger stimulant cathartics must be avoided—the Epsom salt solution, (No. 97.) is preferable to other purgatives ; for, diffused in that way, it is always pleasant, and gentle in its operation.

We should always inquire in these cases, whether there be any rupture ; for, from the strangulation of the intestines pushed out into the sac externally, this complaint sometimes arises.

In order to stop the vomiting, the saline draught in a state of fermentation (No. 59.) should be tried—sedative glysters, (No. 116.) and plaisters of mithridate, may be applied to the stomach—leaves of common garden mint, boiled in port, and laid on the pit of the stomach and wrists, have been found sometimes superior to every other application.

Should there be any appearance of bile copiously discharged, softening glysters, such as decoction of linseed and marsh-mallows, with oil, should be had recourse to—acidulated drinks also, with lemon or orange juice, vinegar, apple-water, &c. chicken-water, sedative emulsions, (No. 81. 83.) to which may be added thirty or forty drops of the tincture of opium, if the pain is violent—and the patient should be put into a warm bath, and remain in it so long as he can bear it without distress.

If this complaint, from a bilious cause, should return, which it is apt to do, a course of saponaceous and deobstruent medicines, (No. 117.) with Seltzer waters, or the water of Bath, or Aix la Chapelle, should be had recourse to, in hopes of performing a radical cure.

So difficult is it sometimes to procure a passage through the intestines, that when the gentler cathartics fail, the most powerful ought to be tried, (No. 108. 115.) to which may be added from half a grain to a grain of opium; or opiates may be given with liquid purges, No. 97. to 99) tobacco glysters, two drams of the leaves in decoction, or smoke, or things which act by their weight, have been recommended, quicksilver, two or three ounces, swallowed in a little broth every two or three hours, or leaden bullets; or taking the patient out of bed, and dashing cold water on his legs and feet, while he stands barefooted on a cold flag, has been attended with success.

A purging once procured, it should be continued some days by the use of cathartics, giving opiates at night, until the foreness and distension of the belly go off, and no hardened faeces appear in the stools.

§ 7. NERVOUS COLIC.

In this complaint, contrary to the other, the vascular system seems but slightly, if at all affected; for the pain will continue extremely severe for five or six days; sometimes for fourteen or fifteen; yet the pulse will not be quicker, or more disturbed than in health; nay, indeed, it has been sometimes slower.

It is called *RACHIALGIA*, from the Greek words *raxis*, spina dorsi, the spine of the back, and *algos*, dolor, pain; because the origin of the complaint has been attributed to an affection of the spinal marrow—also the *COLIC* or *POICTIERS*, because there it is endemial, or peculiar to the country—*DEVONSHIRE* and *WEST INDIAN COLIC*, from its being common in those countries—*PAINTERS*, *PLUMBERS*, *POTTERS*, *MINERS*, from their being most subject to it, and *SATURNINE COLIC*, from its frequently affecting the makers of white lead, or the reception of the particles of lead into the habit.

DESCRIPTION. This complaint is attended with very severe pains in the back and loins, as if it was in the center of the mesentery, (46.) which do not increase on pressure—the navel is very often drawn inwards, and the intestines sometimes also to the spine; so much so, indeed, that the forcing up of glysters has been impracticable—the body is costive, and the complaint extremely obstinate; sometimes terminating in torpor, or numbness

numbness of the hands, and palsy; at others, in chronical fixed contractions of the limbs.

CAUSES. The *remote* or *inducing* are, particles of lead received into the habit—or the smoke from lead—or drinking water which runs over its ore—unripe acid wine—cyder—punch—and white wine not sufficiently fermented—eating or drinking too freely, or too frequently of things acerbly acid. The *proximate* or *immediate*, similar to that of the colic, (356.) and the *characteristic signs* also, if we add, the pain creeping more particularly to the loins and back, with a retraction of the navel, and sometimes of the intestines, inwards.

CURE. Before the complaint is confirmed, in the beginning, success may be expected from the application of such glysters as were before prescribed, (No. 25. 26.) adding to them castor oil, and keeping the body open with emulsions of the same oil, (No. 66) with which two or three ounces of tincture of fenna may be mixed.

Cold must be avoided, and a very light easily digestible diet strictly adhered to.

But in the more advanced stage, where there is generally a vomiting of green bile, *the discharge is to be encouraged* by drinking freely of thin weak broth—the *hardened excrements evacuated by repeated glysters—an alleviation of pain procured* by more than common doses of opium, (152.) and these repeated—the belly must be fomented with warm fomentations, (No. 85. 111.)—warm bathing partially used—and the umbilical region blistered.

I have sometimes found great benefit by opiated emulsions, (No. 118.) given till stools were procured freely; afterwards opiated antimonials, (No. 119.) occasionally giving the emulsion.

In Charlestown they adopt the following scheme:

First, they bleed, then give the glyster, (No. 114.) and repeat it two or three times, till a stool or more are procured—if this does not alleviate the pain, then an opiated glyster, (No. 116.) and the following morning exhibit the vitriolic mixture, (No. 120.)—the effects produced are generally a discharge of a great quantity of acid bile, for the first four or five days, upwards and downwards, which by degrees grows less, leaving gradually only a slight nausea, a few yellow stools daily, and sometimes not any.

Broth, gruel, and panada, are allowed as diet—if such food is loathed, about the eighth day, bread and boiled chicken are allowed, with rum plentifully diluted as beverage—all fermented liquids and acids are prohibited, and so is sour punch, for
some

some months; and the patients return to their common mode of living by slow degrees.

If a pain in the stomach continues, which is sometimes the case, rhubarb is advised, and a plaister of galbanum applied to the stomach.

Though death by these means should be avoided, not unfrequently a palsy succeeds. This complaint has been relieved, sometimes cured, by rubbing the limbs and down the back along the spine, with Barbadoes tar and rum, or rock oil, (150.)—the Barbadoes tar, or balsam of Peru, taken internally, has been thought serviceable. (No. 121.)

But should these not succeed, change of climate, sea voyage, or the natural hot baths, are the only remedies from whence success is to be expected.

§ 8. PAIN OF THE LIVER, OR HEPATALGIA.

from *epar*, jecur, the liver, and *algos*, dolor, pain.

When pain affects the liver, as well as spleen, it is very often impossible to distinguish them from some of the species of colic, during the life of the patient; nay, indeed, some practitioners think it unnecessary, since they require the same mode of cure as the colic from a bilious cause, (358, &c.)

But as these arise from different causes, it may not be useless to describe some of them; viz. those which arise from *schirrhusity*, or *hard tumefaction of the liver*, (33.)---*obstructions of the gall ducts*, (35.) from very viscid bile—the gall bladder (35.) being also full of bile—and *gall stones*, so called.

When pain of the liver owes its origin to SCHIRRHOUSITY, it is attended with the following symptoms:

DESCRIPTION. There is a tumor and hardness on the right side below the short ribs—sense of weight, with a dull and tensive pain, which is constant—the patient breathes with difficulty, and has a dry cough—and, after eating moderately, there comes on a loathing, and sense of pressure on the stomach, with an increase of the difficulty of breathing—besides, he cannot lie with ease on his left side—the countenance is yellowish, pale, and fallow—the urine often of an orange colour, and deposits a thick mucus sediment—these are generally the first appearances, which, if the complaint continues, as is too frequently the case, the feet are seized with a soft pasty swelling—the superior parts fall away—and the conclusion is, a dropfy of the belly, with a remittent fever.

When the cause is OBSTRUCTION OF THE GALL DUCTS, from biliary or viscid obstructions, the symptoms of a schirrhus liver,

er, which come on in the beginning, attend but in a much slighter degree—besides, there is a flushing heat of the face, with redness and heat coming on now and then in the palms of the hands—an irregular thirst—dryness, and bitter taste in the mouth—a dry cough—viscid saliva—loss of appetite—heart-burn—weariness and heaviness of the limbs—increase of pain on touching and pressing the left side—and the habit most commonly costive—in this case the hardness on the right side is not so firm as in the former, nor are there any pasty swellings, or hectic symptoms.

When it arises from GALL STONES, there is a deep-seated and excruciating pain on the right side of the stomach, extending to the back, about the place where the ductus communis choledochus, or duct of the gall-bladder, (36.) is inserted into the duodenum, (42.) which remits and increases; the patient complains of sickness, and vomits much—the right side is distended with flatulence—the belly costive—the excrements pale-coloured, sometimes white—the pulse is weaker, but scarce at all quickened, unless the pains are very violent, and continue long—indeed, *the violence of the pain being unattended with fever, and quickness of the pulse*, is considered as the certain symptom of this disease—the patient, either in an erect posture, or lying on the left side, feels much uneasiness—hence becomes restless—there attend also difficulty of breathing—heart-burn, and sometimes convulsions—at first the urine is pale, afterwards yellow—and the skin and white of the eyes have a jaundice-like appearance—the pain at last vanishes suddenly, which is sometimes succeeded by a looseness, by which the gall stones are thrown out of the habit—and the yellowness wears gradually away.

CURE. Pain in the liver from schirrhosity, (361.) is apt to attack gluttons—hard drinkers—those who lead indolent sluggish lives—and also arises from suppression of some hæmorrhages—bruises upon the right side—and very often in those afflicted with long-continued intermittent fevers—and generally proves fatal, when once completely formed—though, if attacked in the beginning, it may be sometimes prevented.

Decoctions of vegetable aperients, with the more powerful attenuating gums, (No. 117.) joined with mercurials and cathartics, (160. 172. to 173.) are serviceable; also grass-roots, dandelion, endive, ammoniacum, myrrh, rhubarb, aloes, calomel, small doses, not to salivate; hemlock, (152. 154.) in all curable cases is very useful.

In CONSTITUTIONS *considered as dry and bilious*, (60.) decoctions of the mild opening roots, goat's whey, and tartarized iron. (13.)

In the cold and phlegmatic (60.) the mode here recommended will be proper when the complaint arises from obstructions of the biliary pores: but, in delicate and irritable habits, spasmodic affections will sometimes be the cause, sedatives and antispasmodics may then be joined with the aperients, asafoetida, camphor, (149, 150.) or with opium, (152.)—and when, by these means, the bile has passed into the bowels, a course of bitters and steel may be necessary to complete the cure, (No. 61 to 64.) ---taking care always to keep the body open with such medicines as are best adapted to move the bile. (No. 108, 117.)

Bath water, and chalybeate springs in general, are beneficial and proper to prevent a relapse.

When it arises from GALL STONES, we must endeavour to promote the expulsion by long perseverance in the use of emollients, (142.) and gentle cathartics, (170, 171, 172.) (No. 66, 98, 99.)---warm baths afterwards, occasionally repeated, in which a cathartic may be given---this mode has proved successful---vomits, and strong expiration, with glysters of fresh urine, and sage infusion, have fortunately succeeded---opiates should be administered to alleviate the pain, joined with aperients; because they promote at the same time a relaxation of the duct---ætherial spirit of turpentine, (No. 122.) has been recommended as a solvent.

In habits full of blood, in any of these complaints, bleeding may be had recourse to, lest inflammation should be the consequence of the violence or long continuance of the pain.

Old people and women are most subject to this complaint---those who lead sedentary lives, drink much of strong ardent spirits, feed on viscid, coarse, and dry aliment, or are subject to the stone and gout.

In order to prevent a return of these complaints, gentle exercise, particularly riding on horseback, should be persevered in; light easily digestible food taken, avoiding all that is viscid.

§ 9. PAIN OF THE SPLEEN, OR SPLENALGIA.

from *splen*, the spleen, and *algos*, dolor, pain.

Here, as in the liver, the disease arises from schirrhosity and obstruction.

DESCRIPTION. When from the FIRST, it is discoverable by a hard tumor occupying the seat of the spleen, (38.) and resembling its figure, attended with a sense of weight---the tumor is sometimes wonderfully large---succeeds a quartan intermittent, and often runs into a dropsy of the belly---the complexion of those labouring under this complaint is of a lead colour---

they grow very thin—are oppressed with difficulty of breathing—and have a sense of weight, drawing the throat downwards towards the left side—they complain of oppression at the stomach after eating—at last their feet become palsy, and they sometimes have ulcers of the legs.

When from the SECOND, it does by no means resemble the figure of the spleen, neither is it hard or circumscribed—the pain is more acute; which, on the scirrhus being formed, becomes dull—attended with a sense of greater weight.

In this there is perceived a load on the left side, afterwards some acute pain, particularly raised in running and walking—the colour of the face changes to one more livid—there is an universal lassitude—difficulty of breathing from exercise—sometimes a dry cough—now and then a palpitation of the heart—eruptions break out—the patients become hypochondriac—have ravenous appetites, &c.—and the disease is extremely obstinate.

CURE. The mode is similar to what has been delivered on the pain of the liver from obstruction. (362.)

CHARACTERISTIC GENERAL SIGNS. Those of the specific causes must be recollected from the particular descriptions—the general ones are, an uneasy, dull, tensive sensation, on the right or left, according whether the liver or spleen is affected; being free from that species of fever which attends inflammations of those organs.

§ 10. PAIN IN THE KIDNEYS AND URETERS, OR NEPHRALGIA.

from *nephron*, ren, kidneys, and *algos*, dolor, pain.

This disease proceeds either from small sand-like appearances, or from a stony substance affecting the kidneys or ureters, (48. 50.)—in the first case it is called GRAVEL, in the last STONE IN THE KIDNEYS; both which we shall treat under one head, as the mode of treatment of the former is similar to the more gentle method used in the latter.

DESCRIPTION. The gravel is most common to old men, the studious and sedentary, and those whose trades oblige them to sit long confined in one posture, as cobblers, weavers, watch-makers, &c.—seldom affects the kidneys, but much more commonly the ureters and urethra, (54.) occasioning oftentimes very great pain which abating, small stones like lentil-feed, but rough, red, and very hard, are passed at that time with the urine—these seldom stick in their passage, and are scarcely dissolvable by any known lithontriptic. (198.)

When

When there is a stone in the kidney, there is generally an excruciating pain in the loins, fixed and permanent, on that side where the stone lodges—the patients complain of heat—the body is costive—and the symptoms are aggravated after eating—when it falls into the ureters, the pain is increased, and extends along their course obliquely in the belly over the hip towards the bladder—men have at this time a painful affection, or drawing up of testicle, women a numbness of the thigh and leg—nausea and vomiting frequently occur—the urine is in part suppressed, and puts on various appearances; at first it is watery, afterwards more copious and turbid; frequently hot, and often bloody, or purulent—a difficulty of making water, or rather a total suppression, comes on—great drowsiness—inflammation—ulceration—and consumption.

But it must be observed, that a stone may be lodged in the kidney without producing any uneasy sensation, unless moved by a hot regimen, or mode of living, violent passions, strong exercise, or jolting in a carriage over rough stony pavements.

CAUSES. The *remote* or *inducing* are, luxurious living, with weak digestive powers—gout and rheumatism—old age—sedentary life—keeping much in bed, or in an horizontal position—drinking wine loaded with tartar, or water full of earthy or sandy matter—peculiarity in the constitution to form this stony substance—or an hereditary taint. The *proximate* or *immediate* need no specification.

CHARACTERISTIC SIGNS. A fixed pain in the region of the kidneys and ureters, unattended with any acute fever, such as accompanies the inflammation of these parts.

CURE. The indications are, to abate the uneasy symptoms, by taking off the spasmodic affection of, sheathing and relaxing the parts, and facilitating the progress of the offending cause, that it may be evacuated—which purposes will be promoted by bleeding, emollient and demulcent decoctions drank plentifully, sedatives, chiefly opiates, oily emulsions, and mild aperients, &c. (See Inflammation of the Kidneys. 243.)

All heating or stimulating diuretics are to be avoided, particularly where calculi are fixed or very obstinate to remove; for they are apt to aggravate the painful sensations, and bring on inflammation—infusion of wild carrot-seed, (No. 123.) has been known to give considerable ease—a solution of kali impregnated with fixed air, (199.) given two or three times a day, and carried as far as the stomach will bear it, is in this case peculiarly applicable—the leaves of the bear's wortle berry, (139.) is here also beneficial—from decoction of raw coffee, twelve berries boiled in a quart of water till it becomes of a deep greenish colour, to

eight or ten ounces, with twenty drops of æthereal spirit of nitre, twice a day for two months, great relief has been derived.

Still, soap leys, (199. taken in milk or veal broth, or soap and lime water, (199.) are considered either as perfect solvents, or rendering the rugged surfaces and sharp points less capable of injuring the sensible membranes, where these hard bodies pass through or lodge.

But sometimes a small stone will pass through the ureters into the bladder, and from thence makes its exit: here then the disease terminates in the most favourable manner; but if it should be too large, it remains there, forming a basis, called Nucleus, for a larger stone---indeed, any hard substance lying in the bladder will give rise to this complaint in constitutions replete with stony matter---in this case it is termed,

STONE IN THE BLADDER, or LITHIASIS,

from *lithon*, lapis, stone.

DESCRIPTION. In this disease, there is generally a pain in the bladder, especially about its neck, and oftentimes bloody urine after riding on horseback, on being jolted much in a carriage, a sense of weight in the perineum, or part immediately before the anus, with an itching of the glans penis, (55.) a slimy sediment in the urine, and frequent stoppages in making water.

But if the stone should be smooth, of a round form, it may lie a considerable time before it is perceptible to the patient, till by its increase of weight, acquired by accession of fresh matter, it creates uneasy sensations---but should it be angular, or have a rugged surface, yet small in size, it generally occasions pain and bloody urine, or a discharge of slimy fluid, with a fruitless effort to go to stool, called *tenesmus*, and difficulty of making water.

All these symptoms though are fallacious---examining therefore with the instrument called a STAFF, used by surgeons for discovering the stone in the bladder, is chiefly to be depended upon; and I believe, when one is found too large to pass, cutting is the only remedy, which must be committed to the hands of a skilful and judicious operator.

Of the cure by internal remedies, we must refer to what has been said above in the cure for pain in the kidney and ureters, proceeding from calculi there.

In this place may be inserted those complaints where the urinary

nary passages are affected, and properly divided into three, according to the nature of the affection---as

1. A SUPPRESSION OR RETENTION OF URINE,

named ISCHURIA, from *isko*, cohibeo, to restrain, and *ouron*, urina, urine.

2. STRANGURY---STRANGURIA,

from *stranx*, gutta, drop, and *aureo*, to make water---when water is made by drops as it were, and there is a perpetual propensity to make it.

3. DYSURY---DYSURIA,

from *dus*, infelicitèr; painfully, and *oureo*, when the strangury is attended with heat, or a sense of scalding.

The FIRST may arise from inflammation of the kidneys, or a stone, and becomes a symptom, and then must be cured as advised in cases of nephritis, (342.) and nephralgia, (364.) but sometimes it derives its origin from mucus thrown into the vessels of the kidneys, (48.) in such a degree as to hinder almost the total secretion of urine.

DESCRIPTION. In this case there is generally a small quantity of turbid urine made, without any pain of the region below the navel, or swelling over the bone at the lower part of the belly, called os pubis, or any signs of the stone or gravel but a dull, heavy pain over the loins; and this happens in constitutions which are generally phlegmatic, (60.) mucous diseases having preceded, and urine before made loaded with mucus.

CURE. Stimulating diuretics, (175, 176.) such as mustard, horse radish, with squills; also soap, (177) in order to clear away the mucus, free the urinary vessels, leave at liberty and solicit the secretory vessels of the kidneys to perform their office; for in these cases we find little or no urine comes into the bladder. We must observe, that when the *suppression* is total, there can be little or no hope of giving relief; it is only in cases where it is partial, that our expectations with success can be flattered.

When the urine is retained in the bladder, we observe a swelling of the lowest part of the belly above the bone situated at the bottom, attended with pain, and often a sense of fulness, and pressure at the neck of the bladder.

CURE.

CURE. Whatever the cause, the mode of relief is similar; if the pain is great, blood should be taken away, and teribinthinate glysters, (No. 124.) thrown up; fomentations (No. 85. 111.) should be used to the belly; the patient should be kept perfectly quiet; the CATHETER, or an instrument to draw off the urine, be as soon as possible made use of; and should the retention return in eight or twelve hours, the operation must be repeated, and this occasionally till the cause creating it be removed, which may be various, and depend on other diseases of the machine—as *paralytic affection of the bladder*--*swelling of the piles*--*indurated excrements*--*fungus swellings in the urethra*, (p. 54.) --*tumor of the prostate gland*, (p. 54.) *hysterics, ulcers, scirrhus, or cancer of the bladder*--*pregnancy*; for the cure of which we must apply to these things which are advised in such of these complaints as appear to be the acting cause.

In THE SECOND AND THIRD DIVISION we find water passes from the bladder but with painful sensations.

DESCRIPTION. Besides the effort to unload the bladder by passing urine by drops, and with great pain, and sometimes scalding, the stimulus, after a small quantity of water has been made, goes off, and soon returns; the feverish affections are increased, the skin grows hot, the belly swells, at the lower part, particularly the penis, and the part running to the anus, appear full; the body is in general costive; and there are frequent efforts to go to stool; there is also a perceptible pain in the back and lower part of the belly, an uneasiness at the pit of the stomach, and vomiting sometimes attend.

CAUSES. Those which are considered the *remote* or *inducing* are said to be—an acrimonious disposition of the humours; cantharides internally taken; the application of blisters; and matter carried from the kidneys, or translated from any other of the ulcerated viscera; strongly stimulating injections, or venereal ulcers of the urethra, (54.) inducing inflammation, exposing the anus to the cold air, particularly during the operation of smart cathartics; an inflammation of the rectum, (45.) or suppression of the piles.

The *proximate*, or *immediate*, an inflammation of the sphincter (51.) of the bladder, or a deprivation of the mucus which defends it from feeling the irritating power of the urine, as it passes through it.

This disease is by no means dangerous, and terminates in the same manner as do other local inflammations, *though extremely rarely in mortification*.

CURE. This requires no mode of treatment different from other local inflammations, particularly that of the bladder, (344.) only

Only we should observe great caution is necessary in attempting to pass the catheter, lest we should increase the irritation; and indeed should that operation be impracticable, a puncture may be made into the bladder in case of great emergency, through the perineum, the part which lays forwards before the anus; some recommend it over the pubis; but the former is much the more eligible; in these cases glysters of warm oil, and tincture of opium, are highly beneficial.

§. RHEUMATISM—RHEUMATISMUS,

from *reo*, fluo, to flow down, or upon, as the ancients considered it to arise from a defluxion of some humour on the particular part affected. There are two other complaints properly come under this head, called

HIP GOUT, ISCHIATICA, or SCIATICA, and the LUMBAGO, deriving their names from the parts they affect; the former attacking the hip, ISCHIUM, and the latter the loins, LUMBI,—hence their derivations—hence the rheumatism is considered as general and local; and it is also attended with febrile affections, frequently—sometimes not—hence styled *acute* and *chronic*.

DESCRIPTION. When it affects the habit generally, it begins with a coldness and shivering, which are succeeded by heat, restlessness, coldness, and heaviness of the limbs; the body is commonly costive, the patient complains of thirst, and the pulse is quick and hard.

To these succeed in a little time acute pain, attacking particularly the large joints, tendons, and their expansions running along the course of the muscles; which pain is increased on motion, often changing its situation, and where it fixes there comes on swelling and inflammation; it sometimes attacks the head and stomach, and very often all the febrile symptoms will go off, and leave the pain remaining. The blood taken away has the appearance of that of pleuritic patients; this is called the acute RHEUMATISM; but when it is not attended with febrile affections, the pain flies from one part to another, giving a sense of stiffness to the muscular or ligamentous parts, and is seldom attended with any swelling.

When the pain recedes internally, there arises much uneasiness and inward stiffness, which on re-appearing go off.

WHEN IT ATTACKS THE HIP, it impedes the free motion of the leg, occasioning pain and an halting in walking, or dragging of the leg; the pain often descends from the hip along the thigh and leg to the feet; and it is sometimes attended with a

violent fever ; in this case the seat of the affection is sometimes in the joint of the hip, and at others in the nerve called sciatic.

WHEN IT SEIZES THE LOINS.—In them there is a very acute pain, with great difficulty in raising the body into an erect posture ; sometimes the pain descends to the lower part of the back, to the thigh-joint, or through the sides towards the bladder—here the muscles of the loins, or the ligaments of the vertebræ, are the seat.

CAUSES. *The remote, or inducing,* are, an exposure to cold suddenly whilst hot, too great loss of blood, or severe purging, hard drinking, immoderate venery, indigestion, a vitiated state of the fluids from other diseases, a too great fullness from evacuations suppressed, and often from quick changes of the weather. The lumbago will also be brought on by lifting too heavy weights, in habits disposed to rheumatic affections.

The proximate, or immediate, have been supposed to be a viscid acrimonious serum obstructing the serous and lymphatic vessels of the muscles, but particularly of the membranes, or ligaments ; or rather a peculiar acrimony, electively affecting the larger joints, membranes, and tendons of the muscles.

CHARACTERISTIC SIGNS. This disease arises from an external, and, for the most part, from an evident cause, attended with pain about the joints, following the course of the muscles, affecting the knees and the larger joints rather than those of the hands and feet ; sometimes the hip, muscles, and vertebræ of the loins : frequently having febrile affections for its associate, sometimes not.

CURE. When it is attended with febrile symptoms, we must have recourse to bleeding, and that repeated according to the strength of the patient, and violence of the inflammatory affection ; and two drams of nitre dissolved in a quart of water, gruel sweetened with honey, and acidulated with lemon juice, forms not an inefficacious remedy, giving a tea cupful every second hour, throwing up occasionally glysters, or giving occasionally cooling purges, to keep the body open, (P. 171, 172. or No. 3. 22, 23, 24.)—to the nitre may be added one-eighth of a grain of tartarised antimony in each dose, or to the purgatives.

Or the antimonial nitrated powder, (No. 125.) with the volatile saline mixture, may be given every five or six hours, (No. 126) adding two or three grains of the powder to the night dose.

Should these not keep the body open, glysters may be given, or aperients added to the powder or mixture.

These generally abate the febrile symptoms, mitigate the pain, and

and evacuate the acrimony, by keeping up a continued, gentle perspiration.

When the disease is on the decline, the rapidity of the fever and the violence of the pain are abated, *not before*—steams of warm water may be conveyed to the parts affected, or friction if the parts can bear it, or liniment of water of acetated ammonia, and oil may be rubbed warm into, and a flannel worn over the part.

After sufficient bleeding, and emptying the intestines, partial or general warm baths have been found to give great relief; and our patients should use the same sort of diet as recommended in inflammatory fever, (212. to 214.) but when all the febrile symptoms begin to abate, mustard whey, (No. 127.) will be an useful drink.

Now from experience we find, though the crisis of this complaint happens either *by sweat*, or *urine* dropping a yellow sediment, *loosens*, or depositing an humor upon the exterior surface, particularly the legs—still it is best conveyed out of the machine by the pores of the skin—hence a course of diaphoretics are advised, and the patient ordered to lie in blankets in preference to linen, in order to add to their efficacy.

When the pain goes off, and the fever subsides, the diet should be more substantial; and with intent to clear the constitution as perfectly as possible from the remains of the offending cause, a decoction should be taken of diaphoretic woods, (No. 88.) or the compound decoction of sarsaparilla—should ulcers happen upon the legs; they should not be dried up too soon, for fear of imprudently repelling the humour to some internal part, which might prove more dangerous.

But sometimes, after the febrile affections are totally gone off, the pain still continues, and here we must labour to attenuate and throw out the acrimony which creates the painful affections, by a course of gentle diaphoretics—such as compound powder of ipecacuanha—or antimonials (230.) joined with opiates, in order that rest may be procured, and the patient's strength supported.

Stimulants are here also required, as tincture of guaiac, 30 or 40 drops upon sugar, and mixed with peppermint water, three or four times a day, or gum guaiac, made into a draught, with 30 or 40 drops of some volatile spirit, (No. 128.) or gum guaiac, and quick lime, equal quantities, well rubbed together—then lime water poured on, and when it has stood some time, decant the limpid part—to this add a few drops of any volatile spirit and it will mix with water without separation—sometimes there will appear an intermission in the pains; and where, at the on-

set of the disease, there have been profuse discharges by the skin, with a copious deposition in the urine;—bark 193, (194.) is highly serviceable, united with volatile tincture of guaiacum, (180) and has been known to relieve very obstinate cases, particularly in debilitated habits.

The CHRONIC RHEUMATISM chiefly affects old men, or those who by indiscretions have so weakened their constitutions, that they are reduced to that standard. The attack of this is not so general, seldom affecting so many places at once; nor do the parts appear so red or swelled—it returns at intervals, without any febrile affections almost, or sweat—and there are sometimes tumors of the colour of the skin, or very slightly red, rising in different parts, rather round, of the size of a nut, affecting chiefly those of full habits, and women who have nor their menses.

In full habits bleeding may be had recourse to *once*—blisters and sudorifics are more useful—repeated purging expedites the cure.

Mercurials, joined with diaphoretics (No. 87.) are extremely efficacious—and also the addition of gum guaiacum to purgatives, (No. 19, 20.)—guaiacum given from day to day, so as to procure two or three stools every day, has been often attended with success; or on the nights previous to giving a purge (No. 19, 20 21.) in the morning, calomel joined with guaiacum has been of great use, (No. 129.)—when the pain is excruciating, opiates (151.) may be given at night.

Volatiles, and opiates externally applied, are often attended with salutary effects, (No. 107.) or stimulating plaister, (No. 130.) sufficient to create proper irritation over the part affected.

Oil of turpentine has been spoken of as an internal as well as external remedy, (No. 122.)

Electricity has been recommended for 15 days, a quarter of an hour each day, drawing the sparks through the parts affected, and giving a few general shocks.

In order to prevent relapses, a flannel shirt should be worn next to the skin; compound decoction of sarsaparilla with milk taken for a month; now and then the warm bath should be had recourse to, and at the proper season sea-bathing.

Some of these modes will be sufficient in common cases; but in such as are more obstinate, change of climate is very often requisite, and also the natural hot baths—or in persons whose vascular system acts with freedom, nothing is more conducive to prevent its return than cold bathing.

In those rheumatic complaints called SCIATICA, or HIP GOUT, and

and LUMBAGO, as they are of acute or chronic kind, so must they be treated in the same manner as we have specified in general rheumatism—only in the hip-gout, when the disease has been obstinate, an issue cut above, or below the knee, has been of great service, as also blistering the thigh.

§ 13. Gout,

so called from the French word *goutte*, an acrid desfluxion—in medical language it is called ARTHRITIS by many, from *arthron*, articulus, a joint, because it affects the joints—by some PODAGRA, from *pous*, pes, the feet, and *agra*, captura, seizure, because they consider the feet as its natural seat---and though it is thought, that there is truly only one species, yet, according to the different appearances it puts on, it has been distinguished---all which may very properly come under two heads---the REGULAR, or FIXED---the IRREGULAR, or UNCERTAIN. GOUT, respecting the seat it occupies---both these species, which we shall proceed to describe, appear to depend upon the strength or weakness of the whole, or some part, or parts of the constitution.

DESCRIPTION. Before the fit comes on, the patients most commonly experience a general lassitude and weariness---are low-spirited--complain of a load and fullness of the stomach after eating--are squeamish very often, and throw up wind--the belly is distended with flatulence---the habit costive, the sweating or moisture of the feet goes off, and the veins there appear full.

After these an acute pain for the most part seizes the joint of the great toe, accompanied with a sense of coldness, as if cold water was poured down--slight shiverings, and other febrile affections--a shooting, gnawing, pungent, or burning pain, seizes the small bones of the foot, or they feel as if squeezed strongly with the hand—in about twenty four hours, the part begins to look red, and swell---a gentle breathing sweat comes on, and then the pain begins to decrease, and the fever disappears.

In the morning patients find themselves better, in the evening worse, because at that time the fit comes on--during the fit men become irascible, and are easily irritated--they have little or no appetite--the body is costive; and a painful sensation of the part accompanies the whole fit--on the first days the urine is high-coloured, and discovers a brick-coloured or red sandy sediment.

In proportion as the constitution is stronger or weaker, so does the fit go off quicker or slower; at which time an intolerable

able itching is perceived between the toes, and the scarf skin falls off in scales like bran,--the joints feel stiff as if they were covered with plaisters and dry, and a period is put to the disease for some time--which again returns.

This is the case of the gout in its first attacks, so long as the constitution preserves a proper degree of power; but in process of time, as the habit becomes weaker, the complaint takes deeper root, the disease seizes the hands, wrists, elbows, knees, and other parts--hard chalky tumours are formed, and the distorted limbs lose all motion. At this period the fits continue almost the whole year, and the afflicted make large quantities of pale urine; they are also tormented with piles, putrid eructations, spasmodic affections, stony concretions in the kidneys, gravelly complaints, and lose all appetite.

The strength of the constitution still failing more and more, till it becomes almost exhausted, the gouty matter, incapable of being thrown out upon the extremities, affects the internal parts of the system, and produces complaints peculiar to those parts from the stimulus it there occasions--*sometimes upon the head*, producing apoplexy, lethargy, palsy, delirium, tremors, and universal convulsions---*sometimes upon the membranes of the chest* occasioning pleurisy---or on the stomach and intestines, whence internal uneasiness and oppression, sickness, vomiting, looseness---during the continuance of these affections, there is no pain in any part, otherwise it generally exerts itself---at length, the constitution being worn out, and having lost all its power, the vital parts, as the brain, lungs, and heart, begin to be depressed, and the machine falls a sacrifice to its own weakness, and the violence of the morbid affection.

This description comprehends the gout in both its forms of regularity or irregularity---it being considered THE REGULAR GOUT, when it fixes upon *the feet*, and is attended with a sufficient strong inflammation, continuing for some days, and gradually going off, with swelling, itching, and peeling of the scarf-skin, in form of scales, like bran.

THE IRREGULAR, when it attacks other places, and is attended with internal debility of the stomach, or other parts; or has slightly affected the joints, and receded; or has not attacked them, but produces inflammation on some internal part.

CAUSES. The *remote* or *inducing* are, full, free, luxurious living---hard drinking, particularly acid and rough wines---indolence, or the omission of accustomary exercise---relaxed, soft, and full habit---immoderate venery in youth---too sudden changing from distilled liquors or spirits, to those which are thin
and

and watery---suppressed evacuations---and an hereditary taint.

It seldom attacks boys, castrates, or women, except viragos, or such as have passed the time of having the menses ; but most commonly men in the decline of life, those of lively imaginations, the studious living a sedentary life, and sitting up late at night.

The *proximate* or *immediate* CAUSE is, a peculiar humour electively fixing in common upon the small joints, or rather thin ligaments ; or, perhaps, upon the membranous coverings of the nerves, there situated ; or sometimes in other parts of the machine, particularly those which are the most irritable.

CHARACTERISTIC SIGNS. A disease accruing without any evident external cause ; but having, for the most part, an unaccustomed affection of the stomach preceding the attack, and also febrile symptoms---a pain in the joints, and that most frequently of the great toe, but *certainly* attacking chiefly the joints of the hands and feet---this pain returns at intervals, and often alternates with affections of the stomach and other internal parts.

Though we allow of two species of the gout, yet it is pretty obvious, that they depend only upon the different proportions of strength in the constitution ;---and this will regulate our conduct in the mode of

CURE ; and here are indicated a separation and expulsion of the morbid matter, and a prevention of its return, or capability of reproducing its morbid effects---in all which we must be governed by the constitution. When the gout proceeds regularly, and fixes in the feet, patience and warm flannels are recommended---and the free use of wine allowed, under the idea of making the deposition of the gouty matter more complete, and assisting the local expulsion.

However, in the most simple and regular cases, I do not recommend a total prohibition of all medical assistance ; nor can I think that large draughts of wine, and loads of flannel, can compensate for the loss of *judicious* advice ; for to me, who frequently have experienced the gout, it is clear, that some things may be done without any risque of present danger, or future mischief, which render the fit oftentimes less violent, shorten its continuance, and obviate the consequent debility ; for I am persuaded, we suffer more from constitutional defects,--the effects of symptoms,--and mismanagement, than from the nature of the disease itself, particularly in those who labour under recent attacks--similar instances we have seen in the treatment of other diseases ; as in the small-pox, where warmth and cordials were instituted for the same purpose, of throwing off the morbid matter

ter by which the fever was too highly increased, and destruction too often, and danger always the consequence.

Let us see who are the men most subject to this malady--hard drinkers, particularly wine-bibbers--men of voracious appetites, who feed on high-seasoned dishes---venereal devotees---men of lively imaginations, and those addicted to severe study, late hours, and good living; and, in short, most of those who, by various means, weaken their digestive powers--if these have the gout in their habit, they seldom escape; if not, commonly acquire it from their own indiscretion.

In men, before they fall into the gout, it generally happens, that their stomach and bowels are loaded with crude materials, viscid humours creeping through the mesentery and other viscera--local fullness in the liver--spleen or sweetbread;--impeded, or irregular evacuations by stool, urine, or perspiration--hence often an acrid state of fluids.

Now, in such constitutions, previous to the attack of the gout, we find a number of symptoms announcing its approach, such as flatulence, load at the stomach, and nausea, or sickness.

Here it would be proper to administer an emetic, (No. 11, 12, 38.) which some gentle purgative should succeed, particularly of the aloetic class, (No. 208.) and this last given two or three times, at proper intervals; after which, stomachic bitters, joined with mild chalybeates, (No. 63 to 65.) or with some of the warm diuretics, (175, 176.) will be useful--these will suffice for the first stage; for I consider the affection of the stomach as that state of the disease; besides, if the patient be of a full habit, and strong, has a good pulse, bleeding may very properly precede this cause.

The mode of living should be moderate, with respect to eating, drinking, and exercise--the flesh of young animals allowed only once a day--vegetables stewed in their own liquid, or with very small portions of water--the beverage, small rum, brandy, or geneva and water--and the exercise chiefly on horse-back.

By these means the stomach and bowels are unloaded, and kept free from accumulations of crude and offensive faeces; visceral obstructions are opened; the fluids made to circulate through the different viscera; the mass of blood pushed forwards to the extreme parts, and surface of the body; the liver, stomach, kidneys, and bowels evacuate their contents in proper proportion; from the lungs, and through pores of the skin, is thrown out a due quantity of perspirable matter, and noxious exhalations; the powers of digestion are increased; and, in fine, the whole

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machine put into as healthful a state as the nature of the case will permit.

Prepared, therefore, for the second or painful stage, if the method above pursued should not prevent its accession, it will come on less violently, continue a shorter time, and leave behind it less debility, from the constitution being freed from any superfluous load, the vascular and nervous system rendered stronger, and the fluids being put in a mild state--however, even here something may be done to mitigate any degree of violence which may occur from constitutional peculiarity, with respect to pain and febrile symptoms, which last are now to be considered only symptomatic.

Diluent cordials, wine and water, sage, balm or mint tea, may be freely drank, and antispasmodics, diaphoretics, and antimonials, joined with camphor and volatiles, (No. 131.) may be taken--if the pain should be excessive. not otherwise, gentle opiates may be added--æthereal spirit of vitriol, water of acetated ammonia, with aromatic confection, and æthereal spirit of nitre; these will promote perspiration, and increase the urinary discharge.

The body should also be kept open with small doses of rhubarb, castor oil, manna, lenitive electuary, and glysters occasionally, if necessary.

The diet should be broths--gruels with a little wine, sago, sallow, arrow-root, tapioca, in which may be put wine, or a little brandy--fresh water fish, eels and salmon excepted--chicken, rabbit, veal, lamb, small birds, and such like may be allowed, but sparingly; they had better be deferred, at least a free use of them, till the decline of the fit;

As for external applications, during the fit, by whatever authority they have been recommended. I am averse to their administration, because the pain seems rather an instrument of nature for the full completion of depositing the whole of the gouty matter, creative of the fit, in the extremities--it should be mitigated, if violent, by the means above described.

Indeed, if the pain is moderate, as well as the febrile symptoms, and the bowels as well as kidneys perform their functions fully and regularly, little is necessary to be done, till the decline of the fit, and then diaphoretics at night are useful.

After the fit is over, a gentle dose or two of physic may be taken, and a little stomachic draught once a day for a week or ten days; and should the joints affected remain weak, we may early use the flesh brush, or flannels impregnated with frankincense, amber, or myrrh, by way of friction--however painful it

may be, I would advise using the joint affected during the fit repeatedly ; for that prevents the too great relaxation of the ligaments from the flux and stagnation of fluids in these vessels.

By these means may this painful disease be mitigated, or the painful consequences often subdued, and always made less severe ; but if we would attempt the cure, we must try that in the periods where there is some long intermissions ; and this by the preventive plan, (62. 97.) to which regimen there pointed out, stomachic and aromatic bitters should be occasionally taken, such as quassia wood, (175.) or bark mixed with steel, (No. 61 to 65.) chalybeate waters, particularly those of Bath—the skin should be kept clean, and a flannel shirt worn next to it---a dose of tincture of rhubarb, (173.) should be taken twice a day ;---and, in fine, such things occasionally applied to, as will contribute to strengthen the stomach and digestive powers, keep up a free state of perspiration, and prevent the body from being costive.

Should these things fail, our last resort must be a milk diet, and that constantly persisted in ; though this will only suit such as have a pretty strong stamina : the weak and very debilitated would probably fall a sacrifice to the change.

When the GOUT assumes its IRREGULAR FORM, we conclude it is owing to the weakened state of the moving powers, not being able to throw the offending matter to the extremities, or, when there deposited, of not keeping it in that situation---and hence the head, lungs, stomach, kidneys, bladder, come to be affected, because they possess more sensibility, and are more irritable than other of the internal parts---however, when it fixes on these parts, it is extremely hazardous, in proportion to its degree of violence---we, therefore, as expeditiously as we can, should labour to throw it out of the habit into the extremities, particularly into the feet.

Now, if the HEAD and LUNGS are affected, and the habit full of blood, we must bleed in proportion to the strength and fullness---afterwards apply blisters to the inside of the thighs and legs---bathe the feet in decoctions of horse-raddish and bruised mustard-seed---some advise wine, or some other spirituous menstruum---sinapisms (No. 30.) may also be applied to the feet---and we should give volatile camphorated medicines, (No. 33. 35 to 37) and with cordials, (No. 19 to 18. 28 to 30.) to increase the motion of the blood, at the same time that it is solicited to the extreme parts.

But should the STOMACH be the seat, vomiting will often be so violent, as to reject almost every thing which is taken ; in order to allay this, we must depend upon cordials, as above, united

ted with opiates; and occasionally give opiates themselves, as twenty or thirty drops, or more, of tincture of opium, at proper intervals---and hot wine, or rather brandy, with spices and garlic, should be copiously administered---and strong aromatic diaphoretics, as snake-root, camphor, volatile salts, &c. (178, 179, 180.)

Which remedies may be applied if the BOWELS should be attacked, and in consequence a looseness supervene, then to them we must add some astringents, as extract of logwood, (140.) tincture of catechu, (139.) columbo root, in powder, ten grains, in tincture, two drams—a drop or two of the compound water of acitated litharge, or ley of iron, called *lixivium martis*, given at proper intervals, have been efficacious, when other applications have failed.

Indeed, in every species of the irregular gout, whatever internal parts it attacks, the same modes of proceeding are necessary, as pointed out here in general, increasing the force of the circulating powers, and soliciting a free flow of them to the extremities, endeavouring, at the same time, to alleviate the oppressive symptoms peculiar to the affected part; as when it attacks the kidneys, we have recourse to emollient decoctions and glysters, with warm baths, &c.

With regard to the mode of living to be observed by gouty patients, or those in whose constitutions there is much of that matter creative of the disease, TEMPERANCE has always been advised---on which I shall beg leave to observe, that by this term is meant such a mode of living as is best adapted to the constitution; for there may be as much intemperate mischief to some habit by drinking too large a quantity of water as of wine; and, indeed, in every species of abstinence, were pursued to such extremities, as weaken rather than properly support the powers of nature.

SECTION XV.

MORBID EVACUATIONS.

WE must now proceed to treat of those disorders whose most striking symptom is some evacuation, which is either not natural, exceeds the limits, or returns at more frequent periods, than what is usual in a state of health.

These may be properly divided into such evacuations as flow from the bowels, called ALVINE, from *alvus*, the belly---SANGUINARY, from *sanguis*, the blood---called HÆMORRHAGES, from *aima*, *sanguis*, and *geo*, fluo, to flow---and SEROUS, from *serum*, or the thinner fluids, as lymph, urine, mucus, sweat, and similar fluids.

Now all these evacuations are either ACTIVE or PASSIVE, similar to what we have said on inflammation. (298. 305.)---when they are ACTIVE, they are solicited by some morbid stimulus, or medicines by which the excretory vessels of the parts affected are put into stronger action, and throw out their contents too copiously, or the vessels burst, and from thence is the evacuation produced---when PASSIVE, the proper powers of the living machine do not excite, but become defective in resistance, as in cases of a constant flux of urine from the relaxation of the sphincter of the bladder. (51.)

Of these truths we shall be convinced, if we consider, that all the fluids of the human machine are contained in different receptacles, as bile, urine, &c. and also that part of them are kept in perpetual motion, as the blood, &c. part of them secreted and excreted; some of which secretions flow out of the body in regular succession, as the matter of perspiration; some are retained for a time, till nature calls them into motion for particular purposes, as milk, semen, &c.

It will therefore appear obvious, that whenever the force of the impelled fluid, or the weight of it, when collected, is too powerful for the natural strength of the vessels or cavities, the vessels which burst, or the sphincters by which they are guarded, and prevented from pouring out their contents, be opened; hence, when either the expulsive force of the contained liquid is too great, and the sides of the vessels too much weakened; or when the fluids are in too great quantity, and the sphincters in too relaxed a state, the rupture of the one, the want of contractile power of the other, will necessarily lay the foundation for the disease; so that it may arise either from an increase of the expulsive and decrease of two resisting power, or from them both happening

happening conjointly in the same habit, and at the same time.

The indications of cure will then be, in ACTIVE EVACUATIONS, to attempt to remove the morbid stimulus, and weaken the powers of the vessels or cavities---in the PASSIVE, to strengthen the vessels or cavities, and give power to the sphincters, that they may act with proper force.



C H A P. I.

ALVINE EVACUATIONS.

THESE may all come under the term LOOSENESS---DIARRHOEA from *dia*, per, and *rheo*, to flow, though they are by authors divided into different species, either from the nature of the affection, or from the appearance of matters which flow through the bowels in too large quantity---the first of which is styled DIARRHOEA, or COMMON LOOSENESS, when there is a constant and remarkable evacuation by stool of liquid matters without much pain or uneasiness; but when there is an evacuation of slimy matter, sometimes bloody, attended with febrile affections, severe gripings, nausea, or sickness, and frequent propensity to go to stool, with very small evacuations from such efforts, it is called DYSENTERY, DYSENTERIA, from *dus*, male, and *enteron*, intestinum, intestine.

When the disease is very acute, attended with a continual vomiting of bilious matter, and at the same time a violent looseness, or at least a nausea, and strong propensity to go to stool, with loss of strength, and very often cramps of the thighs and legs, it is called CHOLERA MORBUS, from *kole*, bilis, bile.

When there is a frequent purging of bloody serum, as if raw flesh had been washed in some liquid, *supposed* to flow from the liver, it is called INDOLENT, because unattended with any severe pain, great sickness, or remarkable loss of strength---this evacuation is therefore named HEPATIRRHŒA, from *epar*, *je-cur*, the liver, and *reo*, fluo, to flow.

If there is a frequent purging, in which the aliments appear scarcely to be changed by the digestive powers, and comes on immediately, or soon after eating, it is termed LEIENTERIA, from *leios*, lævis, smooth or slippery, and *enteron*, intestinum, intestine.

Should there be a frequent evacuation of *white matter*, supposed to be chyle, it is termed COELIACA, from *kœilia*, venter, the

the stomach, or first bowels, where the first digestion takes place, and forms chyle, which chyle is supposed to give the appearance from whence this disease is nominated.

If of black matter, or of a deep red colour, is then called *MELÆNA*, from *melas*, niger, black, unattended with any putrid smell, sudden deprivation of strength, or remarkable degrees of pain, or nausea.

However, it will be sufficient to take notice only of two of these, as the rest may be cured by the same means made use of in some of the stages.

§ 1. CHOLERA MORBUS, OR BILIOUS, VOMITING AND INTESTINAL FLUX.

The seat of this complaint seems to be the whole intestinal canal, particularly the stomach, head of the duodenum, (42.) and *ductus communis choledochus*, the common duct of the gall bladder. (36.)

And it is apt chiefly to attack such as are of bilious, dry, choleric habits, or whose constitutions are loaded with scorbutic acrimony, or the first passages with acid humours, or are of irascible dispositions.

DESCRIPTION. Though this disease will sometimes come on very suddenly, it is often preceded by heart-burn, a gnawing, painful sensation of the stomach and bowels, and rancid eructations—after which succeed enormous vomitings, and intestinal discharges of vitiated humours, bilious, green, yellow, and sometimes black, with great difficulty and pain—there is also a violent pain and distention of the belly and intestines, accompanied with thirst—a pulse at first full, strong, and frequent, afterwards weak and irregular—heat, and anxiety—moreover, there attends a nausea extremely troublesome—sometimes a contraction of the legs and arms—an acute pain above the navel—retention of the urine—fainting—coldness of the extremities—the body becomes weak, and the spirits low—with other symptoms of a similar nature, which greatly terrify the attendants, and will destroy the patient in forty-eight hours.

This disease generally makes its appearance in autumn, more especially after a hot and dry summer.

If the disease is more than commonly violent, the evacuations downwards are very numerous, amounting in the space of a few hours to ninety or a hundred—the patients soon become emaciated and reduced—and the symptoms above specified are quickly followed by hiccough—universal convulsions—cold sweats

sweats—frequent swoonings—and either in one of these fits, or in a convulsed state, when the disease proves fatal, they expire.

CAUSES. The *remote* or *inducing* are, eating of pork, bacon, fat meat fried in oil or butter—or sweets, grapes, cherries, cucumbers, melons, or all such viands as become readily rancid or acid—poisons—strong purgatives—violent rage—and acrimonious bile.

The *proximate* or *immediate*, constrictions of the stomach and small intestines, particularly the duodenum, by bilious or acrimonious humours irritating and vellicating the sensible nervous coats, which cause an increase of action in these organs, producing different symptoms, according to the parts locally or sympathetically affected.

CHARACTERISTIC SIGNS. An acute disease, attended with the vomiting of some humour, mostly bilious or acrid matter, at the same time a frequent intestinal evacuation, or at least a nausea and tenesmus, or frequent desire to go to stool, accompanied with anxiety, abdominal pains or gripings, and very often spasmodic contractions of the legs.

CURE. The indications are, to breathe, dilute, and expel the acrimonious humours, take off the convulsive affection; afterwards to restore strength and activity to the stomach and intestines; and these are done, first, by drinking freely of weak chicken water, made by boiling a chicken in three gallons of water, so that the decoction just tastes of the flesh—large draughts of which should be taken, and given in glysters till the whole is consumed—about three or four hours after which an opiate, (No. 4.) may be given; and this mode, if at first made use of, will generally complete the cure.

Or, very weak beef or mutton broth, divested of fat—or milk and water—fresh butter—milk—decoctions of rice or barley—or infusions of oaten bread, toasted and made brown like coffee—or wheat-bread, or oat-meal toasted may do, where chicken-broth cannot be had—indeed the infusion of the oaten bread has been preferred by some, as it has been observed to sit easiest on the stomach, and never vomited up.

But should the patient have been purged for ten or twelve hours before assistance has been given, an opiate should be administered during the urgency of the symptoms, and the doses large and repeated, proportioned to the violence of the disease. —SYDENHAM gave twenty-five drops in an ounce of cinnamon-water, and that proving inefficacious, in half an hour the dose was increased, and repeated at such intervals as gave room to suppose the effect of the former dose had ceased, before the succeeding one was administered—and after the severity of the disease

ease abates, the opiate should be repeated night and morning, till the strength and spirits return.

In common cases this will be sufficient; but if the patient is of a *full, sanguinary habit*, *bleeding* is immediately necessary—should the pains of the stomach and intestines be extremely violent, partial warm baths, or local fomentations of the spirituous kind, may be had recourse to, and camphorated and volatile liniments, (No. 107. 132.)

Should, after copiously washing the stomach with some of the diluting liquids, the affection of the stomach still continue, the fermentative saline draught. (No. 59.) may be exhibited; or the infusion or powder of columbo-root, ten or fifteen grains to a dose, at proper intervals, which is often an effectual remedy—cataplasms of mithridate,* Venice treacle,* or opiated confection, or the leaves of common mint bruised, boiled in port, may be applied to the pit of the stomach and wrists—and mint tea, or weak infusions of cloves or cinnamon, may be taken occasionally.

In cases of great heat and internal uneasiness, nitre is recommended—from thirty grains to sixty of powdered columbo-root, from the first, taken every three or four hours, have been said in three or four days to have completed a cure—indeed, in hot climates, it has been esteemed almost a specific.

After washing the stomach extremely well, in ten or twelve hours that organ settles, opiates then given in a liquid, or solid form, as best agrees, are requisite to allay the disturbance which has been created in both the nervous and vascular systems; which must be continued at bed-time; and, in about three or four days, a dose of rhubarb may be proper, and, at night, an anodyne.

Should the appetite be left weak, a draught of the infusion of quassia wood, with a few drops of dilute vitriolic acid, may be given twice a day, or some other bitter infusion, (No. 63 to 65.)—and the patient should return gradually to the common mode of living.

The mode of treatment here recommended is proper in this complaint arising spontaneously, or from an epidemic cause.

But when it originates from food got into a state of fermentation and corruption, besides plentiful dilution, with watery and mucilaginous liquids, we must have recourse to emetics and aperients, (165. 172, &c.) (as ipecacuanha, emetic tartar, callos oil, rhubarb, &c.) and afterwards warm bitters and tonics, and corroborants, with aromatics. (No. 61 to 65.)

If it is brought on by *strong emetics and purgatives*, warm sedatives are necessary, to allay the agitation of the bowels and stomach,

mach, (No. 113.) spirituous fomentations and volatile camphorated liniments, (No. 107. 132.) afterwards, to alleviate the uneasiness occasioned by the violent action of the emetics and purgatives.

If *violent anger* should be the cause, emetics and purgatives are to be avoided; nor must cold water be given immediately afterwards, as we should run the risk of bringing on an inflammation of the stomach—the acrimony of the bile we must endeavour to correct, by proper absorbents, (191) united with nitre, (No. 2.) diluting and sheathing it with mucilaginous and watery liquids, as barley-water, thin gruel, bran tea, decoctions of hartshorn shavings, and such like lubricating and emollient drinks—afterwards, when the hurry is over, it may be carried off by emetics and aperients.

If it deduces its origin from *acrimonious irritating poisons taken internally*, we must depend upon filling the stomach and intestines with oily and mucilaginous liquids, to guard them from the effects of their stimulus—absorbents added to these liquids are said to render them more efficacious—or alkaliescent substances, (192.) well diluted, might be serviceable, if the poisons had been of the saline kind, for reasons advanced in inflammations of the stomach from the same cause. (337.)

§. 2. DYSENTERY, OR TENESMODAL, DYSENTERIC, INTESTINAL FLUX.

When this disease is epidemic, it seizes indiscriminately all classes of people—but those in general are most subject to it who are of bilious constitutions, (60, 61.)—who feed on corrupted diet, unripe fruit, and drink fermenting liquids—and who expose themselves to the moist night air, after being in the day-time much heated by the sun. It is most rife in summer and autumn, when damp cold nights succeed hot weather.

It is not only infectious but contagious; because it has been known to be occasioned by the smell of dysenteric fæces, and from having recourse to the same close-stool after people labouring under dysentery, and also from the nurse's milk, under similar circumstances.

DESCRIPTION. This disease is generally ushered in by a general lassitude and chillness, with a loss of appetite for some days, which are succeeded by great degrees of heat—restlessness—nausea—vomiting—heart-burn—and uneasiness at the pit of the stomach—thirst—and a quick pulse—excruciating pains then seize the belly, which occasion a frequent evacuation from the intestines, but small in quantity—the matter evacuated is either

mucous, thin, and serous, bloody, frothy, and often mixed with thin skin-like, or filamentous substances—the bowels are loaded with wind, which rolls about, and makes a considerable noise—and the patients are perpetually desirous of going to stool—have a strangury, and often a slipping down, or protrusion of the lower part of the rectum, (43.)—the loss of strength becomes extreme—and whilst the extremities are cold, they perceive in the interior parts great heat—then soon come on a hiccough, and cold sweats.

At length the pain suddenly ceases—the fæces, extremely offensive, pass away involuntarily—the pulse becomes weak—the thirst goes off—and, whilst the unhappy patient is flattering himself with the hopes of recovery, from the apparent alleviation of the symptoms, he suddenly expires.

This disease, notwithstanding it is often fatal to adults, but most of all to such as are much advanced in life, still in infants it is very mild; for they will be affected with the same disease for some months without any inconvenience, if it is left to the direction of nature.

Though the general progress of the disease is here described, practice demands us to make some necessary distinctions.

If the dysentery is of the **INFLAMMATORY KIND**, there will be a high degree of fever—hard full pulse—extreme pain of the belly, which, on handling, increases, and, after vomiting, is still more distressing—the head aches—the countenance is flushed—sometimes the belly is distended—in quantity the evacuations are small.

If of the **PUTRID KIND**, there will be a bitter taste in the mouth—shiverings now and then come on, as it pursues its course—the feverish affections are slight—the face pale—the evacuated matter variously coloured—besides which, a bilious vomiting, sometimes accompanied with worms, is an associate.

It is of what is termed the **MALIGNANT SORT**, which it may be from the very beginning, or occasioned by the milder sort degenerating from constitutional defect or mismanagement—the pulse is then weak—the strength fails suddenly—the countenance has a cadaverous aspect—the voice is weak—the head heavy—there is great oppression at the pit of the stomach, attended with slight convulsions, sickness, and frequent fainting—and, now and then, eruptions of different kinds make their appearance, such as those of the miliary class, spots like flea-bites, and thrush.

CAUSES. It is supposed to arise from acrimonious matter of a putrid nature; because it makes its appearance in moist warm seasons, adapted to generate putrescency, chiefly attacks those of scorbutic habits, (61.) and originates from vapours of putre-

putrescent blood; particularly because it softens and corrupts the parts affected, generates air very copiously, and renders the fæces highly putrid; and also because, on the dissection of bodies dying of this complaint, the intestines, especially the colon and rectum, (43, 45.) are preternaturally thick, distended with air, inflamed, ulcerated, and in a mortified state—the inner or villous coat abraded—the bile greenish like a leek, viscid, and often of a black colour—and the blood very dark in appearance.

CURE. Of whatever nature this disease may be, the indications are similar, and depend upon evacuating the acrimony, or determining it to other places—weakening its action—alleviating the distressing symptoms, by rendering the intestines less sensible to its irritating effects, in its FIRST STAGES—in the LAST, recovering the tone, and giving strength to the relaxed and weakened vessels.

To promote these purposes, in full habits, where there are apparent symptoms of inflammation, the patient should be bled once or twice, according to their urgency, and the strength of the patient.

In the next place, the stomach and intestines should be unloaded by emetics and cathartics—twelve grains of powdered ipecacuanha, and one of tartarized antimony, should be well mixed together, and divided into three parts, and one given every second hour—no liquid should be taken after the first dose; but after the third, weak beef tea, or chicken broth, should be drank liberally to encourage the vomiting—after which a slight opiate will be requisite.

Should the emetic produce smart evacuations upwards and downwards, the succeeding day it is not necessary to order any thing except a grain of opium, mixed with three or four grains of ipecacuanha into pills, with syrup of white poppy heads, and given at bed-time.

But should the emetic not have produced any purgative effects, a purging powder, made of thirty grains of rhubarb, and three of calomel, must be administered the morning following.—As for my own part, in the beginning of this complaint, I prefer the oil of castor emulsion, (No. 66.) as it relaxes the coats of the stomach, sheaths the acrimony, produces evacuations, and mitigates the pains of the bowels.

But as is the nature of the disease, so should be the election of our purgatives—if of the *inflammatory kind*, the salines are preferable, (172.)—if the *putrescent*, the antiseptic, as tamarinds, cream of tartar, &c; (No. 23, 24. 50, 51.) but in every case,

after the effects is produced, an opiate should be administered at night.

In the intermediate spaces of time, small doses of nitre, accompanied with antimonials and saline mixtures, may be exhibited, joined with sheathing medicines, such as gum tragacanth, arabic, starch, if the fever keeps up—or should it be of the *low malignant*, gentle cordials are proper.

However, should not the disease soon yield to this mode, but the symptoms still continue, particularly griping and purging; small doses of ipecacuanha may be given, sufficient only to create a nausea, (No. 133.) increasing or decreasing the dose agreeable to the effects, and joining it with antiseptics, cooling, or cordial medicines, as the particular nature of the case may require.

Should the stools continue remarkably viscid and offensive, every second or third day a purgative should be given, and at night an opiate.

We must proceed in this manner, till, from the regularity of the pulse, the cessation of pain, and propensity to stools, as well as from the want of them, we may conclude the disease terminated—but should not these appearances occur in the course of a few days, we have reason to apprehend the greatest danger—we must then, if the symptoms continue as violent as at first, have recourse to fomentations, (No. 111.) and glysters of the sheathing and anodyne sort, made of milk, broth, marsh-mallow or linseed decoction, with starch and tincture of opium.

Besides the ipecacuanha, other medicines are recommended, and, if we believe the recommendation, falling little short of *infalibility*, viz. from two to ten grains of created glass of antimony, from ten to fifteen grains of powdered columbo every three or four hours—the decoction of semirauba bark is considered as a *specific*, and said to remove the disease without the danger or inconveniencies attendant on astringents, (No. 134.)

At the close of the complaints astringents are useful, particularly tonics; and, indeed, also when the most violent symptoms of fever, pain, and tenesmus have ceased, to relieve the relaxed state of the vessels.

In pursuing the modes here laid down, we shall seldom fail of curing this complaint; but should it be accompanied with a putrid malignant fever, there will be little hope of a recovery—however, we should try the effects of ANTISEPTICS, (192 to 194.) particularly wine, infusions of bark and snake-root, with a few drops of tincture of opium in each dose, and the free use of subacid fruits, (192.) taken by themselves, or squeezed plentifully into other liquids—indeed, fruit, and things of a similar nature

ture, will form, in these cases, the proper plan of diet—but when dysenteries are unattended with any high degree of putrefaction, decoctions, and jellies of rice, sago, tapioca, salep, the white decoction, chalk mixture, weak chicken-broth or beef tea, are most proper—though all solid animal food must be avoided.

When flatulencies become distressing, which will sometimes be the case, chamomile flower tea, infusion of cinnamon or cloves, or liquids impregnated slightly with other aromatics, may be occasionally administered with great advantage.

However, we have had instances of some of these complaints which were epidemical, and from their nature so extremely destructive, as exceeded the powers of medicine, supposed to be owing to their deducing their origin from acrimonious humours, highly caustic—in which a total loss of strength, swelling of the belly, sinking of the pulse, a discharge of blackish stools, and clammy sweats, were certain signs of the irremediable state of the disease.

With respect to the COMMON DIARRHOEA, if it is unattended with any weakness, loss of appetite, or febrile affections, and is moderate in quantity, it very often is of service to the constitution, and is rather conducive to health than otherwise; but should it run on to too great excess, it will require the same means for its cure, and will be conquered much more easily than the dysentery—and, indeed, all the other species we have specified require the same treatment—at the beginning clearing the first passages of any irritating contents, by proper emetics and cathartics; next soliciting the flow of fluids to the surface by diaphoretics, and strengthening the stomach and bowels by tonic astringents, bitters, strengthening medicines, and *particularly* riding on horseback, at the close of the complaint.

With regard to the HEPATIRRHŒA, we must proceed as advised in that disorder called *tabes hepatica*, or hepatic consumption, (334. 335.)



C H A P. II.

HÆMORRHAGES,

FROM the Greek words *aima*, sanguis, blood, and *rennumi*, erumpo, to break out, or

SANGUI-

SANGUINARY EVACUATIONS.

All these effusions of blood are considered as morbid, which either flow from particular parts not naturally accustomed to produce such evacuations; or, though producing them periodically, still afford them in too great quantity, or return at too quick periods, that the machine, by these means, is so injured, as to experience some defect in executing its functions properly, and consequently falls into a diseased state, attended with a greater or less degree of danger, according to the violence of the effusion, or to the consequence of the part from whence it flows.

Now all hæmorrhages arise, either when the circulatory propulsive powers are increased to a great degree of violence; or that the resistance of the blood on its part and the vessels should be diminished; or that each of these things should happen at one and the same time.

Hence, then, we find, that complaints of this nature may be occasioned in four different ways---by the vessels being ruptured, dilated, or eroded; or, by the blood having lost its natural viscosity, and becoming to thin---under any of these circumstances, the vessels not being capable of confining the blood within its proper channels, occasion hæmorrhage---whence arise a variety of these complaints, taking their names from the places from whence the blood issues; or the action of the parts producing, instead of their natural, these sanguinary discharges.

Hence BLEEDING OF THE NOSE, named EPISTAXIS; from the Greek word *epistazo*, sanguinem e nasibus stillo.

SPITTING OF BLOOD---HÆMOPTYSIS, or HÆMOPTUON, from *aima*, sanguis, blood, and *ptuo*, to spit.

VOMITTING OF BLOOD---HEMATEMESIS, *aima*, sanguis, and *emeo*, to vomit.

MAKING BLOODY URINE---HÆMATURIA, *aima*, blood, and *ouron*, urine.

PILES---HÆMORRHOIDS, *aima*, sanguis, blood, and *rheo*, fluo, to flow.

MENORRHAGIA, *mene*, menses, and *rheo*, to flow.

In all morbid effusions of blood, from whatever place they issue, we endeavour to find out the proximate or acting cause before enumerated, and form the modes of cure accordingly;---but as effusions of blood from the lungs is of the most dangerous nature, we shall select that, in order to point out the particular mode of proceeding, and occasionally advert to what deviations may be necessary on account of the difference of situation of the part affected.

§ 1. SPITTING OF BLOOD, OR HÆMOPTYSIS.

All morbid effusions of blood through the mouth take this general name, except that which is vomited up---and this appellation we think improper---if blood comes from the gums or throat, or drops from the superior part of the nose internally into the superior part of the fauces, it may be right; for the effusion externally will only be attended with a spitting, slight cough, or hawking; but, when from the lungs, the cough is more considerable---we shall therefore distinguish the complaint of which we are about to treat, by the term,

§ 2. COUGHING UP OF BLOOD.

DESCRIPTION. In this complaint, for the most part, a chillness---lassitude---coldness of the feet---difficulty of breathing come on---a weight, or undulating sensation is felt about the diaphragm---flatulence in the belly---and pain in the back---at length there comes on a tickling and itching in the windpipe, from whence issues forth blood---if it is recent, the colour is florid, the fluid frothy, and coughed up in large mouthfuls---but it is not always of a very florid colour---in some cases it is of a blacker hue, as it remains and concretes more or less in the vesicles.

From the symptoms here enumerated it appears, that a spasm of the whole machine takes place before the effusion.

CAUSES. The *remote* or *inducing* are said to be, a fullness of blood, brought on by some accustomed evacuations being impeded, if, at the same time, the action of the vessels should be strongly increased by anger, violent motion, living upon too hot food or liquids, or violent cough, should the exertions in protruding the fæces in costive habits be too powerful---long exposure to severe cold, causing a contraction on the surface of the body and the external vessels, air possessing too much levity in very high situations, a suppression of the menses or piles, too great a rarefaction of the blood, spasmodic contractions of some of the viscera, scirrhus obstructions in the neighbouring viscera, or a scirrhus or polypus in the vessels of the lungs themselves---or, in fine, whatever determines too large a quantity to the lungs, and causes it to circulate too forcibly against the vessels which are not obstructed, or some diseases which break down the texture of the blood, or erode the vessels, as scurvy, pulmonary consumption, small-pox, or those depending upon a putrescent acrimony of the fluids.

Those which are *proximate* or *immediate* we have before enumerated,

nerated, (622, 623.) but most commonly it is a rupture of the vessels preceded by an universal spasm.

CHARACTERISTIC SIGNS. A flushing of the cheeks, sensation of uneasiness, or pain, sometimes heat in the breast, a tickling of the fauces, cough, and throwing up of florid coloured blood, often frothy.

People most subject to this complaint are those of slender, delicate frames, who have long necks, are narrow chested, whose blood is acrid and copious, and are between twenty-five and thirty years old.

CURE. This disease is always to be considered of a very dangerous nature, and requires very early and effectual assistance—in doing which, we must endeavour to solicit the blood from the lungs, moderate its heat, take off the external spasmodic affections, and heal the vessels, if ruptured.—If then it proceeds from too great fullness we must have recourse to bleeding, in proper quantities, and at such intervals as the necessity of the case demands—all animal food must be prohibited, even the weakest broths—and *the diet should be by no means nutritious*, but should chiefly consist of vegetable juices, such as burned turnips, apples, oranges, panada, thin gruels, ices, and such simple materials—the *liquids allowed* should be nitrated emulsions, Seltzer water with milk, or barley water, thin whey, or toast and water drank cold—the body should be kept at perfect rest, seldom in a recumbent posture, nor should the patient be allowed to speak, scarce at all; nor, indeed, should any thing be permitted that can in the least increase the motion of the lungs—opiates should be exhibited now and then, if necessary, to procure rest, and the body kept open by glysters, (No. 25, 26.) or gentle cooling aperients, (171, 172.) that the blood may not be impeded in its circulation downwards.

The mind of the patient should be kept perfectly at ease—and the first and second bleeding should be copious, from large orifices, and quickly repeated, if the violence of the case requires it—for one free bleeding in this stage is of infinitely more service than a number of sparing ones.

Nitre should be given freely in any eligible form, as it is much to be depended upon; for it lessens the motion of the blood, and allays its heat, consequently prevents strong vascular action, and the expansive power of the blood.

Keeping the body open with cooling aperients, (171, 172.) particularly Glauber's salts largely diluted, (No. 125.) is extremely useful, taken now and then, till the effect is produced twice, or oftener.

Should the cough be very troublesome, some of the oleaginous

nous medicines, (No. 81 to 84) to which nitre may be added, and given to allay the pulmonic irritation.

This method in common and recent cases will almost always succeed ; but when it proceeds from previous injury in the texture of the blood, and weakness of the lungs, constituting that kind which is habitual or consumptive, little can be expected from bleeding ; for this, by weakening the system, and contributing more to dissolve the texture of the blood, seems rather calculated to increase the mischief, inasmuch as it adds power to its causes ; small doses of antimonials, (180.) or ipecacuanha, (180.) are most likely to produce good effects, by determining the flow of blood to the surface, and demulcents, (188.) by adding to the viscosity of the fluids.

And should the pain, difficulty of breathing, and cough, cease with the efflux of blood, we may give tonic medicines, as decoction of bark, (193.) to which may be added the balsam of capivi, (165.) or some of the mild balsamic clafs ; for we may reasonably infer, that there is no more extravasated fluids in the pulmonary vessels.

But it sometimes happens unfortunately, notwithstanding all our efforts, that though the efflux of blood may be stopped for a few hours, or days, it will return with a quick hard pulse, troublesome cough, oppression, and difficulty of breathing, then we may have reason to be alarmed, and fear a supervening consumption—in this case we have little to depend upon but general remedies, such as goats whey, ass' milk mixed with Seltzer water—or the waters of Bristol should be had recourse to—riding, swinging, sailing, and a milk diet ; for some have, by these means being rigidly pursued, happily recovered.

Slight vomits may also be given three or four times a week, early in the morning, merely to give two or three motions—three or four grains of ipecacuanha is sufficient and fully adequate to answer every useful purpose.

§ 3. BLEEDINGS OF THE NOSE

are not commonly attended with much inconvenience, and generally yield to topical applications—which may be had recourse to, if the pulse becomes weak and small, the cheeks and lips lose their natural colour, and the extremities be seized with unusual coldness—the common remedies are smelling at vinegar, or solutions of white vitriol, applying dofsils of lint by themselves, or loaded with some styptic, as styptic tincture, alum, &c. cold wet cloths, or cold iron applied to the nape of the neck.

But when the affection is accompanied with any great increase of vascular action, which will be attended with a strong, quick, full pulse, heat, head-ach, and other symptoms, indicative of too strong vascular power, we must have recourse to bleeding, and such remedies of the cooling kind as we have advised, (392, &c.)—but should vascular debility, or the blood being in a loose dissolved state, be the cause, we must depend upon astringents and tonics, particularly bark and the vitriolic acid—creating nausea and gentle vomiting is recommended, as advised, (394.)—if by these means a period is put to the hæmorrhage, the body should be kept in a state of perfect quietude—if costive, aperients and glysters should be exhibited, and a paretic should be given at night. And as almost all active hæmorrhages arise from too great plenitude, occasioned by the suppression of some natural discharge, particularly in young full habits—in older constitutions, which are supported by plentiful, or more copious diet—whence they are preceded by pain and fullness of the head, occasioning drowsiness---in order, therefore, to form a preventive plan, abstinence is necessary, keeping the head cool, the body open, making the slightest suppers, and those of the most light and refrigerating diet; but they are altogether better avoided.

§ 4. VOMITING OF BLOOD, OR HÆMATEMESIS. (390.)

The characteristic marks of this disease are, frequent nausea or efforts to vomit, and at the same time a rejection of bloody materials by the mouth, mixed with such as have before been swallowed—from whence the stomach feels some alleviation; but the blood vomited up is grumous---and the stools which, succeed afterwards are black.

This affection, however, is more common to women than to men, and less frequent in both than the making of bloody urine. ---If a woman in this disease should menstruate, she is cured; for it often is occasioned by a suppression of the menses---and in men, from an obstruction of the bleeding piles, and also from intarction of the liver and spleen---still it may be occasioned by other causes; such as full and free living---swallowing down constantly large quantities of succulent or juicy food, at the same time indulging in indolence---and the blood pushed forwards in the course of circulation too rapidly, by severe exercise, running, riding, fits of anger, and the too free use of vinous and spirituous liquors.

CURE. In these cases, though bleeding may be sometimes necessary, it must be cautiously repeated---we must be governed by

by the strength of the patient, which is sometimes apt to fail suddenly---the pulse readily flags;---the sanguinary flux is apt to be extremely copious, and often occasions fainting.---Nor should any thing be given that is likely, in the least degree, to be offensive to the stomach.---As therefore it is essentially necessary to have the body kept open, we must depend upon glysters chiefly---though rhubarb in small doses, *if the stomach will bear it*, has been recommended.

Weak, broths, with some of the astringent vegetables unboiled;---such as plantain---ground ivy---cup-moss---nettles--or rather their expressed juice, may be given---infusion of red roses--sloe--or cold water, acidulated with the vitriolic acid--may be administered as drink---also ices---and at night gentle opiates, mixed with astringents of the milder class;---avoiding all those which are likely to create nausea---such as alum, white vitriol, &c.

In all the different species of this complaint it will be necessary to proceed in this manner.---But if the suppression of the menses, or of the bleeding piles, should be the cause, these are to be solicited to their natural passages by proper means; or should they arise from affections of the liver, or spleen, such medicines should be exhibited as are calculated to relieve them as much as the state of the stomach will permit.

But here we must observe, that in the middle of pregnancy, they are rarely injurious; but if in fever, they are always fatal, if the blood be black and fetid; nor should we flatter ourselves with much hope, if they proceed from enlargements of the spleen, or liver, and induration, or should there be fainting to any degree of severity.

§ 5. BLOODY URINE, or HÆMATURIA. (390.)

In this complaint, the matter passed through the urethra is either pure blood, or bloody urine, that is, urine having acquired intense redness from being mixed with some particles of blood. The most common causes of which are stones, or gravel lacerating the different parts of the urinary passager; but it may be occasioned by venereal excesses, as blood may issue from the feminal vessels (two membranaceous cellular tubes, lying on each side, between the bladder, (50.) and rectum, (45.) on the outside of the vasa deferentia, (53.) and also from the prostate glands; (54.) hence are they considered amongst the causes, as are also dissolution of the blood, or violent exertions of the

circulatory powers, in severe inflammatory fevers, particularly in the small-pox.

Whatever may be the cause, two points are to be considered, whether there is an *inflammatory*, or, *putrefactive* disposition in the blood.

If the former is prevalent, and the habit full, we must bleed, and that repeatedly, till we have taken off the general plenitude, and allayed the intenseness of the action of the vascular system, the bowels should be kept open with saline purges and manna, (172.) and emulsions with gum arabic, and cooling decoctions of linseed tea mixed with nitre, should be freely administered, and the uva ursi (139.) may be administered, which in this case I have seen extremely efficacious, other astringents are not adviseable.

If the SECOND,---tonics---astringents---and balsamics---as bark—lime water—tincture of roses—alum whey should be had recourse to, to restrain, as quickly as possible, the efflux of blood—and by continuing afterwards the use of the bark, joined with the balsam of capivi—drinking chalybeate waters, and using a milk diet, endeavouring to strengthen the tone of the system, and prevent a relapse.

But without either of the constitutional tendencies above recited, should the cause be a suppression of menses, or piles, and these cannot be restored or solicited to their natural passages—occasional bleeding will be a salutary substitute.

Or should it deduce its origin only from calculi, during the fits of pain we must guard the parts against the effects of their stimulus, by emollient and demulcent remedies, (140—187.)—ætherial spirits of nitre, and such like—afterwards we must endeavour to strike at the cause, as recommended in pain of the kidneys. (364.)

Here we must observe, that in all cases of great pain, opiates should not be forgot, especially if stone or gravel is the cause—and, indeed, in discharges from the ureters, and kidneys, the infusion of carrot-seed (No. 123.) has not been slightly recommended.

But in all cases of bloody urine, all powerful astringents should be industriously avoided, lest they should produce too strong a constriction of the passages, and from thence coagulated blood might be restrained, productive of inflammation, or forming a nucleus, or basis for a stone.

Sometimes the urine will appear to be extremely high-coloured, as if blood had been mixed with it—of this it is necessary to be certain;—which may be discovered by straining the urine through fine linen—perfectly clean—if there should be
any

any admixture of blood, it will be stained of a red colour—if not, there will be no such appearance.—And lastly, great care should be taken in properly discriminating between bloody urine, and sanguineous discharges of a gonorrhœa, or clap---or from piles making their exit through the urinary passages;---and critical discharges should be distinguished from those that are not.

§ 6. PILES, or HÆMORRHOIDS. (391.)

These have been divided into the OPEN and BLIND---the *first*, when they are attended with an effusion of blood---the *last*, when they give no such appearance---or into *exterior* and *interior*, from their situation.

They are not always, however, to be considered as a disease, for they are a very salutary discharge, and sometimes periodic, preventing a number of other complaints, which are apt to appear, on their being imprudently expelled, or stopped.---I have known people, from this cause, labour sometimes under a variety of internal affections, which have all vanished on their re-appearance. To those afflicted with gout---who are hypochondriacal---hysterical---subject to complaints of the kidneys, or bladder---to sciatic pains---asthma---mental derangement, and some others, they are considered to be highly serviceable. Hence, whilst they continue moderate, and appear to be a salutary effort of a nature to relieve herself from some superfluous load---there is no need of medical assistance. But if they are extremely and constantly painful, or pour forth a large quantity of blood, so that the patient experiences great debility, and grows thin, they then may be considered as morbid.

Those who are disposed to become corpulent, eat, and drink freely;---whose habits are relaxed---costive---plethoric---from indolence, or any other cause, are most liable to this complaint; besides, strong purges will also bring them on. These causes induce obstruction in, inflammation, and swelling of, those vessels called hæmorrhoidal; whence, about the anus, there will be livid, painful tubercles; from which frequently issue blood, which also sometimes flows without any visible tumour, attended often with a load, and pain of the head, giddiness, and pain of the loins and anus.

CURE. *When there is no efflux of blood, from the piles*; they are generally attended with such great degrees of pain, that people are afraid of going to stool. Under these circumstances, if people are of full habits, bleeding, abstemious diet, and mild aperients---(No. 3. 22 to 24. 66. 135, or 136.) to take off the

the fullness, and preventive costiveness, should be had recourse to, ---after, warm olive oil may be applied to the part---or diluted preparations of lead (139) with camphorated spirits and lime water ;---juice of houseleek---to any of which may be added tincture of opium. The patient should, as much as possible, be kept in a recumbent posture ; and, when sitting up, avoid pressure on the parts---or heating them---for which purpose a chair, stuffed round the edges, with a vacuity left in the center, should be used.

The diet should be of the mild laxative, emollient kind, nor any thing taken which can heat, or cause the blood to circulate with too great freedom.

WHEN THE PILES ARE OF THE BLEEDING SORT, and it becomes necessary to stop the flux of blood, cloths dipped in vinegar and water may be applied to the loins, and anus, which failing, or not soon succeeding, a gentle emetic may be administered, (No. 11.) and after the operation, the anodyne draught, (No. 4.)

In these cases, the indications of cure are very obvious. To take off the superincumbent pressure from, and lessen the action of the vessels, towards the affected part ; to strengthen the tone of the vessels relaxed, and take off local irritation.

But as these discharges are brought on by infarctions and obstructions of the liver, other things are necessary to be done, in order to prevent a relapse ; for under these circumstances patients are liable to frequent returns ; hence, in order to remove the causes, we must have recourse to such medicines and regimen as have been advised in pain of the liver from those sources—(Page 351.)

Sometimes this disease will arise merely from want of strength, and tone in the rectum, (46.)—Preparations of iron, (139.) united with bitters, as quassia wood—gentian—chamomile—and such like, and continued for some time, are highly beneficial,—and bathing the parts with a sponge dipped in cold water, twice every day.—And in every species we must carefully avoid all aloetic aperients—for they are too apt to stimulate the rectum,—nay, rhubarb will sometimes have this effect ; hence, as it is of the utmost consequence to keep the body open, should there be occasion, and that moderately ; for strong purging will exasperate, rather than alleviate the complaint, the gentlest aperients, (171, 172.) should only be insisted upon, and those given in such quantities, and at such intervals, as merely to keep the bowels empty. This disease has been observed also to originate from excess of grief, long continued, as well as from a profusion of the menstrual discharge—and most probably is caused by a general

and the patients spit up frequently frothy saliva—they complain of heat in the viscera—the urine is limpid, sometimes sweet, and has generally not an unpleasant smell—there is a kind of fullness of the loins, testicles, and feet—hectic fever—after which succeed a tabes, and death.

It seldom attacks young people, but those advanced in the latter stages of life, who have been used to drink freely of vinous liquors, and employed in the severer occupations.

CAUSES. The *remote* or *inducing*, preceding febrile diseases, particularly if they are subdued by immoderate evacuations—too long continued use of acidulated waters, particularly in a cold climate, or diuretic medicines—also the bite of a serpent called *DIPSAS*, from the Greek word *dipsa*, sitis, thirst, because it occasions so great thirst as often proves mortal.

The *proximate* or *immediate*, an increase of action of the secretory vessels of the kidneys, arising from a state of relaxation, and a thin acrid serosity of the circulating fluids, and a too powerful determination of them to the kidneys.

CHARACTERISTIC SIGNS. A preternatural discharge of urine, immoderate in quantity, and of long continuance, attended commonly with loss of appetite, emaciation, and hectic symptoms.

CURE. The indications are, to lessen the action of the secretory vessels, by altering their relaxed state, and correcting the too great serosity and acrimony of the fluids—hence we must apply to the use of inspissants, diaphoretics, stimulants, and tonics—and as soliciting a flow of liquids to the skin will prevent too great a determination to the kidneys, in order to keep a free and constant state of perspiration, the patient should wear a flannel shirt next the skin, use moderate exercise, and dry friction.

Alum whey is strongly recommended, (No. 138.) four ounces to be taken at least three times a day—lime-water drank also, whilst the warmth in quenching continues, taken as freely as the thirst requires, has been said to exceed the use of Bristol water, which by some has been considered as a specific in this disease—half an ounce, or six drams of oak bark infused in two pints of lime-water, and the chalybeate waters, have had their powerful advocates.

White vitriol is a useful astringent, (139.) but some depend on half a grain of blue vitriol given twice a day in any proper liquid.

Preparations of iron, (139.) or elixir of vitriol joined with bark, (193, 194.) are no interior tonics; and, by strengthening the habit, contribute much in the promotion of perspiration.

Rhu-

Rhubarb, (173.) has been recommended as efficacious in laying the foundation for the success of antispasmodics.

As a stimulant, tincture of cantharides, (175.) is by some in this case looked upon as a specific.

Notwithstanding the thirst is a very distressing symptom, aqueous liquids should be avoided—they should be impregnated with some inspissating ingredient, as comfrey-root, or made with lime; and these should be used as common drink—boiled meat is less useful than roasted—broth made of beef may be allowed—shell-fish—wild fowl—jellies in small quantities, and often repeated—tapioca, milk, rice gruels, and such similar viands, may be permitted.

Opiates also at night will be serviceable given with some preparations of iron and diaphoretics. (No. 139.)

This disease sometimes affects hysteric patients, who pass large quantities of limpid urine; hence it is called *hystericus*—sometimes it supervenes intermittents; hence denominated *intermittens*—sometimes it attacks people worn out by the gout, in whom, during the painful fits, the urine is small in quantity, and turbid; but in the intervals of the discharge, from perspiration being defective, becomes clear, watery, and copious.

To the general plan, which we have before laid down, we must therefore subjoin antispasmodics, under the first circumstance—under the second, tonics, particularly bark—and under the third, invigorating cordials, agreeable to the specific nature of the case. See HYSTERIA, INTERMITTENT FEVER, and GOUT.

Sometimes people will be affected with a morbid evacuation of sweat, where that discharge is remarkable for its quantity, quality, and unseasonableness—this is called

§ 2. EPHIDROSIS, OR MORBID EVACUATION OF SWEAT

from *ephidroo*, fuderam movere, to occasion sweating, which is proportionable to the quantity of perspirable matter contained in the blood, to the velocity with which it is separated, and to the heat or laxity of the pores of the skin—when it arises from an increased circulation of the blood, it is active—when it depends upon the laxity of the skin, and superabundance of serum, it is passive.

When the sweat is *cold*, it denotes superabundance of perspirable serum, and a relaxed state of the skin—when *warm*, velocity, and, at the same time, serocity of the blood.

But when these profuse sweatings are connected with miliary, hectic, or other fevers, we are not to consider the discharge as a disease which requires management particularly adapted to itself, we must endeavour to destroy or evacuate the seeds of the

febrile affection, as by that means only can we conquer its consequences; for in those cases the sweating is purely symptomatic.

But when profuse discharges of the skin come on without any evident cause or fever, flowing chiefly in the nights, and occasions falling away of the flesh, loss of strength and appetite, with lowness of spirits, it then requires medical assistance.

CURE. Here are indicated a diversion of the flow of fluids, a decrease of their ferocity, and our endeavours to give general force and tone to the system.

Hence purgatives, at proper intervals, will answer the first and second indications—tonics and strengthening medicines the last, such as preparations of iron, bark, bitters, steel waters, moderate exercise, and the use of the cold bath—to which we would add, the frequent administration of milk.

Properly supporting, and judiciously increasing the alvine discharges, are in this case extremely beneficial; for these divert the flow of fluids from the skin, as in the former case increasing perspiration solicited the humours from their determination to the kidneys.

When this complaint arises, as it sometimes does, from a scorbutic acrimony, and the blood being in a loose dissolved state, which is very often succeeded by that species of consumption called ATROPHY—the sweat pours forth in the middle of winter under the slightest covering, and at the same time affects the patients with restlessness and anxiety; nor do they cease till the vitiated humours are in a great measure discharged by this cuticular flux.

Here, as well as where the sweats are of different colours, the remedies recommended are, the juices of fresh vegetables, subacid fruits, and the use of tonics, particularly bark.

THE FORMS OF MEDICINE

PRESCRIBED AND REFERRED TO IN

MIXED, REMITTENT, INTERMITTENT, AND ERUP-
TIVE FEVERS---ALSO INFLAMMATORY, PAINFUL
DISEASES, AND FLUXES.

No. 70. BARK DRAUGHT.

Take Decoction		1 ounce.	
Tincture	}	$\frac{1}{2}$ an ounce.	}
Powder			
Extract		of each 10 grains.	
Syrup of Quinces,		2 drams.	
Mix.---			

71. INFUSION OF QUASSIA WOOD AND SNAKE-ROOT.

Take of Quassia Wood,	1 1-2 dram.
Snake-root,	1 dram.
Boiling Water,	1 pint.
Infuse.---Dose. Four spoonfuls.	

72. OAK BARK BOLUS.

Take of Oak Bark in Powder,	6 grains.
Alum, -	3 grains,
Chamomile Flowers in powder,	8 grains.
Syrup, sufficient to form a Bolus.	

To be taken every third or fourth hour.--The Extract or Powder of the Scale Cup may be used in the same proportion---or the Pomegranate Bark, and Chamomile Infusion, (No. 60.) may be also exhibited.

No. 73. BARK GLYSTER,

Take of Bark Decoction,		of each 2 ounces.	
Distilled Water,	}		
Extract of Bark,		2 drams.	

Olive

Olive Oil, $\frac{1}{2}$ an ounce.
Tincture of Opium, 8 drops.

Mix.---And let this be thrown up every fourth hour.

74. BARK CREAM.

Take of Bark Powder, 1-2 an ounce,
Extract of the same, 2 drams.
Cream, 1 1-2 ounce.
Sugar, 3 drams.

Mix.---DOSE. Two or three spoonfuls every second, third, or fourth hour, according to the exigencies of the case.

75. ASRINGENT DRAUGHT.

Take Cinnamon Water, 1 1-2 ounce.
Spirits of Cinnamon, 2 drams
Electuary of Scordium, 1 scruple.
Syrup of White Poppy Heads, 2 drams,

Mix.---

or---76.

Take of Infusion of Roses, 2 ounces.
Spirits of Cinnamon, 2 drams.
Extract of Logwood, 10 grains.
Syrup of White Poppy Heads, 2 drams.

Mix.---Either of these may be given every three or four hours,
---or the quantities of these may be enlarged, and formed into mixtures, of which two or three spoonfuls may be administered occasionally.

77. ASTRINGENT OPIATES.

Take Infusion of Roses, 2 ounces.
Columbo-root powdered, 10 grains.
Tincture of Opium, 6 drops.
Syrup of White Poppy Heads, 1 dram.

Mix.---

or---78.

Take Infusion of Logwood, } of each 6 drams.
Lime Water, }
Tincture of Catechu, 2 drams.
———— Opium, 6 drops.
Syrup of White Poppy Heads, 1 dram,

Mix.---Either of these may be taken every fifth or sixth hour.

No. 79. CALOMEL POWDER.

Take

Take Prepared Calomel,	2 scruples.
————Crabs Eyes,	2 drams.
Tartarized Antimony,	1 grain.

Let these be rubbed well together, and ten or twelve grains administered for a dose.

80. PURGING POWDER.

Take Rhubarb,	} in powder,	6 grains.
Jalap,		3 grains.
Ginger,		1 grain.

Mix.--

81. OILY EMULSION.

Take Oil of Sweet Almonds,	1 ounce.
Gum Arabic,	2 drams.
Fine Sugar,	1-2 an ounce.

Mix these well together, then gradually add

Decoction of Barley,	8 ounces.
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Dose. Three or four spoonfuls often in the day.

82. OILY LINCTUS.

Take Oil of sweet Almonds,	1 ounce.
Gum Arabic,	3 drams.
Syrup of Marsh-mallows,	1 1-2 ounce.

Mix these well together. Dose. Two or three spoonfuls often in the day, or, it may be acidulated with a few drops of dilute vitriolic Acid--or, an ounce of Syrup of Lemon may be added.

or--83.

Take of Oil of Sweet Almonds,	1 ounce.
Gum Arabic,	3 drams.
Syrup of Wild Poppy,	1 1-2 ounce.

Dilute vitriolic Acid, which will give it a grateful acidity.

Mix.—Dose, as above.

84. SPERMACEI MIXTURE.

Take spermaceti, (dissolved in a proper quantity of Mucilage of Gum Arabic, or Yolk of an Egg.)	} 1 1-2 dram
Cinnamon Water,	
Syrup of Wild Poppy,	1 ounce.

Mix.—Dose. Two table spoonfuls occasionally.

No. 85. DISCUTIENT FOMENTATION.

Take of common Fomentation,	2 pints.
Crude Sal Ammoniac,	2 drams.

Common

Common Vinegar,	} of each 2 ounces.
Spirits of Wine,	
Mix—	

86. CAMPHORATED LOTION.

Take of simple Lime Water,	} of each 4 ounces.
Common Vinegar,	
Camphorated Spirits,	
Mix.—	

87. ALTERNATIVE MERCURIAL PILLS.

Take Gum Guaiacum,	1 dram.	
Calomel prepared,	} of each 2 scruples.	
Precipitated Antimony,		
Balsam of Capivi, sufficient to		form these into a mass
—and make of every dram twelve pills.		

88. DECOCTION OF THE WOODS.

Take Sarsaparilla,	3 ounces.
Guaiacum Wood,	} of each 1 ounce.
Sassafras Shavings,	
Boil these in three pints of water till they are reduced to two	
adding towards the close,	
Liquorice-root bruised,	1-2 an ounce.
Then strain it for use.	

or---89.

Take Sarsaparilla,	2 ounces.
Bark of the Root of Mezereon,	1-2 a dram.
Boil these in the same manner as above, and add the liquorice:	

90. ANTIPUTRESCENT LOTION.

Take of Lime Water,	16 ounces.
Camphorated Spirit,	3 ounces.
Spirit of Sal Ammoniac,	1-2 an ounce.
Mix----	

91. ANODYNE EYE WATER.

Take Rose Water,	2 ounces.
Tincture of Opium,	2 drams.
Mix----	

No. 92. VITRIOLIC SOLUTION.

Take Purified White Vitriol,	6 grains.
Rose Water,	2 ounces.
Tincture of Opium,	30 drops.
Mix---	

No. 93.

93. DETERGENT GARGLE.

Take Decoction of Barley,	8 ounces.
Common Vinegar,	1 ounce.
Tincture of Myrrh,	1-2 an ounce.
Honey of Roses,	1 ounce.
Mix.---	

94. ANTISEPTIC GARGLES.

Take Tincture of Roses,	8 ounces.
Honey of Roses,	6 drams.
Tincture of Myrrh,	1-2 an ounce.
Spirit of Sea Salt, sufficient to create an agreeable acidity,	
Mix.---	

95. EXPECTORANT MIXTURE.

Take Pectoral Decoction,	8 ounces.
Ammoniacum Milk,	} or each 3 drams.
Oxymel of Squills,	
Mix.—	

or—96,

Take Acetated Ammonia,	2 ounces.
Distilled Water,	5 ounces.
Myrrh in powder,	40 to 60 grains.
Nitre purified,	1-2 a dram.
Vitriolated Steel,	15 grains.
Balsamic Syrup,	6 drams.
Mix.—DOSE. Three or four spoonfuls two or three times a day.	

97. SALINE PURGING MIXTURE.

Take Epsom Salt,	6 ounces.
dissolved in Boiling Water,	1 pint.
DOSE. Two or three spoonfuls every half hour.	

98. OILY PURGING MIXTURE.

Take Oil of Castor,	2 ounces.
Distilled Water,	5 ounces.
Unite them with a proper quantity of the Yolk of Egg, or Mucilage of Gum Arabic, and then add	
Syrup of White Poppies,	1-2 an ounce.
Mix.—DOSE. Two spoonfuls every second hour.	

or—No. 99.

Take of Oil of Sweet Almonds;	1 ounce.
Manna,	1 ounce.
Rochele Salt.	6 drams.

dissolved

dissolved in Infusion of Senna, 6 ounces.
 Mix, as before directed, and let this be taken in the same manner.

100. PURGING PILLS.

Take Jalap in powder,	} of each 1-2 a dram.
Polychrest Salt,	
Venice Soap,	
Opium,	

6 grains.
 1 grain.

Let these be formed into six pills for a dose.

or—101.

Take Extract of Jalap,	10 grains.
Resin of Jalap,	} of each 3 grains.
Calomel prepared,	
Opium,	1 grain.

Syrup of Roses, sufficient to form four pills for a dose.

102. SUPPOSITORY.

Take of Honey,	} of each an equal quantity.
Common Salt,	

Boil them to the consistence of a soft pill, and roll a portion of this up about the thickness of a Goose's quill, and an inch long, which pass into the rectum—Aloes, Bitter Apple, or some other ingredient of this sort may be occasionally mixed with them.

103. IRRITATING GLYSTER.

Take the Decoction for Glysters,	1-2 a pint.
Tincture of Aloes,	1 ounce.
Common Salt,	2 drams.
Linseed Oil,	2 ounces.

Mix.—

104. PURGING ANTIMONIAL MIXTURE.

Take Distilled Water,	5 ounces.
Epsom Salt,	2 ounces.
Tartarized Antimony,	2 or 3 grains.
Syrup of Roses,	6 drams.

Mix.—

No. 105. CALOMEL BOLUS.

Take Calomel prepared,	from 3 to 6 grains.
Tartarized Antimony,	1-8 of a grain.
Conserve of Hips,	10 grains.

Mix, with the addition of Syrup, into a bolus, to be taken at bed—

bed-time, and in the morning after the following draught;

106. PURGING DRAUGHT.

Take of Infusion of Senna,	2 ounces.
Tincture of Aloes,	1-2 an ounce.
Tincture of Senna,	3 drams.
Syrup of Roses,	1-2 an ounce.
Spirit of Lavender.	2 drams.

Mix.—

107. VOLATILE OPIATED LINIMENT.

Take of Soap Liniment, or the	} 2 ounces.
Liniment of Ammonia,	
Tincture of Opium,	2 drams.

Mix.—

108. ALOETIC PILLS.

Take Extract of Bitter Apple with Aloes, i	1-2 dram.
Calomel,	20 grains.
Oil of Carraway-seeds,	10 drops.
Syrup of Roses, a sufficient quantity to form pills;	

Dose. From ten to twenty grains.

109. APERIENT SOAP PILLS.

Take Venice Soap,	1 1-2 dram.
Rhubarb powdered,	1 dram.
Calomel prepared,	10 grains.
Syrup of Ginger, sufficient to form pills.	

Dose. Twenty grains.

110. SEDATIVE LINIMENT.

Take Oil of Almonds,	1 ounce.
—Amber,	from 10 to 20 drops.
Tincture of Opium,	1 dram.

Mix.—

111. SEDATIVE FOMENTATION.

Take the Heads of the White Poppy	} 4 in number.
bruised,	

Let these be boiled in forty ounces of Water to twenty, then add;
 Vinegar, 3 ounces.
 Fixed Ammoniacal Salt, 5 drams.

Mix.—

No. 112. OPIATED PLAISTER.

Take Burgundy Pitch, a quantity sufficient to form a plaister of a proper size, to which add ten grains of Opium.

113. OPIATED CORDIAL MIXTURE.

Take Peppermint Water,	6 ounces.
Spirit of Juniper,	1 ounce.
Opiated Confection,	1 dram.
Syrup of Saffron,	1-2 an ounce.

Mix.—Dose. Three or four spoonfuls.

114. GLYSTER WITH BITTER APPLE.

Take the Common Glyster Decoction, 8 ounces.
in which boil

Senna,	2 drams.
Bitter Apple,	1-2 a dram.

strain, and add,

Linseed Oil,	2 ounces.
Honey,	1 ounce.
Sal Ammoniac,	2 drams.

Mix.—

115. PURGING PILLS.

Take Resin of Jalap, or	} 5 or 6 grains.
Scammony,	

Rub these well with Mucilage of Gum Arabic, and Crumbs of Bread, sufficient to form three or four small pills.

116. SEDATIVE GLYSTER.

Take Common Glyster Decoction, or	} 6 ounces.	
Barley Water,		
Tincture of Opium,		1 dram.
Mithridate,		1 1-2 dram.

Mix.—

117. DEOBSTRUENT SOAP PILLS.

Take of Soap,	} of each 1 dram.
Myrrh,	
Ammoniacum,	
Ammoniacal Iron,	
Rhubarb in powder,	1 dram.
Syrup of Roses, sufficient to form pills.	

Dose. Fifteen or twenty grains.

No. 118. OPIATED EMULSION.

Take Castor Oil,	2 ounces.
Tincture of Senna,	1 1-2 ounce.
———Opium,	40 drops.
Peppermint Water,	5 ounces.
Syrup of White Poppies,	1-2 an ounce.

Mix.—Dose. Three spoonfuls.

119. OPIATED ANTIMONIAL POWDER.

Take Antimonial Powder,	4 grains.
Opium,	2 grains.
Rhubarb in Powder,	5 grains.

To be administered every eight hours.

120. VITRIOLIC MIXTURE.

Take of Blue Vitriol,	1-2 a dram.
Distilled Water,	1 1-2 pint.

Mix.—DOSE. From one tea-spoonful to two table-spoonfuls every two or three hours, till it produces its effect.

121. BALSAM OF PERU DRAUGHT.

Take of Balsam of Peru,	from 10 to 30 grains.
Mucilage of Gum Aarbic,	sufficient to mix into a draught, with
Peppermint Water,	1 1-2 ounce.
Syrup of Ginger,	2 drams.

122. TEREBINTHINATE MIXTURE.

Take Æthereal Oil of Turpentine,	from 1 to 2 drams.
Mucilage of Gum Arabic,	sufficient to form a mixture,
with Peppermint Water,	6 ounces.
Tincture of Rhubarb,	1 ounce.
Syrup of Saffron,	1-2 an ounce.

DOSE. Four spoonfuls two or three times a day.

123. INFUSION OF CARROT-SEED.

Take the Seeds of wild Carrot,	1-2 an ounce.
Boiling Water,	1-2 a pint.

When cold, add to it a little Milk and Sugar, and drink it twice a day.

124. TEREBINTHINATE GLYSTER.

Take either of the Glysters, No. 25, 26. in which dissolve, by means of the Yolk of Egg,

Venice Turpentine,	2 drams.
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No. 125. ANTIMONIAL NITRATED POWDER.

Take Antimonial Powder,	3 or 4 grains
Nitre purified,	10 grains.
Crabs Claws prepared,	8 grains.

Mix.—

126. VOLATILE SALINE MIXTURE.

Take Water of Acetated Ammonia,	2 ounces.
Polychrest Salt,	1 1-2 dram.

3 F₂

Syrup

Syrup of Wild Poppy, 1-2 an ounce.
Pennyroyal Water, 6 ounces.

Mix.—

127. MUSTARD WHEY.

Take Bruised Mustard-seed,	1 ounce.
Cow's Milk,	1 quart.

Boil them together, and strain off the Whey.

128. GUM GUALIACUM DRAUGHT.

Take Gum Guaiacum,	from 20 to 30 grains.
Mucilage of Gum Arabic, sufficient to form a draught,	
with Peppermint Water,	1 1-2 ounce.
Compound Spirit of Ammonia,	} from 20 to 30 or 40 drops.
Syrup of Saffron,	
	2 drams.

129. GUAIACUM AND CALOMEL BOLUS.

Take of Gum Guaiacum,	20 or 30 grains.
Calomel, repared,	3 grains.
Oil of Carraway-seeds,	2 drop.
Conserve of Orange-peel,	20 grain.
Syrup of Saffron sufficient to form a bolus.	

130 STIMULANT PLAISTER.

Take of Soap Plaster,	} equal parts.
Gum ditto,	
Powdered Spanish Flies,	
	1-8 part of the whole.

Mix.—

131. ANTIMONIAL CORDIAL DIAPHORETIC BOLUS.

Take of Atimomial Powder, 3 grains.
Camphor, } of each 4 grains.
Volatile Salt of Hartshorn }
Aromatic Confection, 10 grains.
Syrup of Saffron, sufficient to form a bolus.

No. 132. CAMPHORATED LINIMENT.

Take Camphor,	2 drams.
Oil of Almonds,	1 1-2 ounce.

Mix.—

133. NAUSEATING POWDER.

Take ipecacuanha Powder,	1 grain.
Nitre, or Aromatic Powder	10 grains.
To be taken every third hour.	

134. DECOCTION OF SEMIPAUBA.

Take of Semirauha Bark, 2 drams.

Distilled

Distilled Water,	}	20 ounces boiled to 16 ounces.
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Dose. Four spoonfuls.

135. APERIENT COOLING SOLUTION.

Take Vitriolated Natron,	1 ounce.
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Nitre,	2 drams.
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Dissolve them in one quart of Water-gruel, then add,

Syrup of Roses,	1 ounce.
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Mix.---Dose. Eight spoonfuls.

136. GENTLE APERIENT ELECTUARY.

Take Compound Electuary of Senna,	1 1-2 ounce.
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Precipitated Sulphur,	3 drams.
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Syrup of Roses, sufficient to form an electuary.

Dose. Quantity of a Nutmeg.

137. TONIC INFUSION.

Take Peruvian Bark in gross powder, 2 ounces.

Infuse it for three days in

Lime Water,	2 pints.
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strain and add,

Tincture of Cinnamon,	1 ounce.
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Compound Spirit of Lavender,	1-2 an ounce.
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Mix.---Dose. Two ounces.

138. ALUM WHEY.

Take Cow's Milk,	2 pints.
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Alum,	3 drams.
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Boil these together, and strain off the Whey for use.

Dose. Four ounces.

No. 139. OPIATED CHALYBEATE BOLUS.

Take of Ammoniacal Iron,	8 grains.
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Powder of Antimony,	6 grains.
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Opium,	1 grain
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or Tincture of Opium,	25 drops.
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Conserve of Roses,	1 scruple.
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Syrup of Quinces, sufficient to form a bolus.



S E C T I O N XVI.

NERVOUS AFFECTIONS.

UNDER this head we are to enumerate those particular complaints in which the nerves are primarily and principally concern-

concerned, as the causes from whence disorders of this kind are produced.—And here we shall be under the necessity of reasoning from effects, because we cannot point out the precise mode of the action of the nervous system; for neither from the labours of the anatomists, nor physiologists we are certain of the structure of the nerves themselves, nor of the means by which they produce such a wonderful variety of actions in different parts of the human machine.

We, therefore, in order to avoid cavil, attempt to materialize, as it were, qualities; and speak of the different degrees of influence which this part of the system exercises; and attributes all complaints arising from this source, either to that influence being too strong, mutable, or too weak, producing SPASM, CONVULSION, or PALSY;—according, therefore, as we find the different parts subservient to nervous influence affected, so do we consider the different states of its power. And if we add to the account the different degrees of muscular irritability inherent in the habit, which we consider as independent of nervous influence, yet for its continuance supported by that influence, (27.)—we shall be furnished with a tolerable clear idea of the nature of different nervous complaints, so called, and be enabled to conceive, pretty distinctly, the reasons why such an amazing variety of affections can arise from one and the same source; for in *spasmodic* affections, the muscular fibres, thrown into a state of contractility, remain in that state for some time; in *convulsive*, contraction, and relaxation take place, and alternate with each other—(145, 146, 147.) and in *paralytic* there appears to be a deprivation, or debility of that influence; as well as sometimes an alteration in the irritable power of the muscular fibres, with respect to the different degrees they possess. In the order we have set down these nervous complaints, shall we treat them; and first—of spasmodic affections:—



C H A P. I.

§ 1. TETANUS;

SO called from the Greek word *teino*, firmo—and its varieties —EMPROSTHOTONOS—from *emprostbon*, ante, before—*epistbon*, pone, behind—and TRISMUS, from *trizo*, stridor. These are marked by different appearances arising from similar causes.

The

The TETANUS—is a spastic rigidity of the whole body—commonly continued—and involuntary ; if it is bent forwards it is called EMPROSTHOTOS—if backwards, OPISTHOTOS—when the jaws are fixed close, TRISMUS, or locked jaw.

This complaint is most commonly met with in hot countries, where it is considered as endemial, particularly in rainy seasons succeeding those which are hot, or in such where there are sudden changes from extreme heat to extreme cold, as in South Carolina—among those who imprudently expose themselves to the night air.—In the more temperate countries it is very rarely met with as an original disease.

DESCRIPTION. In tetanus the body grows stiff, and appears like a species of wood, from the equable contractility of the muscles before and behind—a spasmodic affection is felt below the breast bone, verging to the spine—when the spasms are violent, most acute pains come on—the face is red and distorted—the cheeks are drawn backwards—the eyes fixed—the jaw sometimes locked—the pulse most frequently is slower than what is natural—and should blood be taken, its texture appears to be less firm—there is much difficulty in respiration—the body is coarctate—the natural actions only are not suppressed, and the senses both external and internal, remain perfect—the ribs curve inwards—and if the disease should be conquered, the patient continues a long time in a state of great debility.

In the two succeeding varieties, the neck at first becomes immovable—afterwards, by strong spasms, it is drawn either backwards or forwards—the motion of the jaw and the act of swallowing are impeded—the spasm under the breast-bone brings on others which are more violent—the pulse is sometimes slow and hard—at others small, fluctuating, and irregular—the tongue grows rigid—a bloody kind of froth issues from the mouth—the muscles of the spine and inferior extremities are drawn into similar action—at length, either by the spasms becoming more violent, or from an epileptic attack, the unhappy patient expires.—In the third variety, the distinguishing symptom is, a strong contraction of the muscles which elevate the lower jaw.

These diseases are of the most dangerous nature, as very few survive the third day, without they come on gradually ; and in that case, if the patient can get over nine or ten days, there is a greater chance of a recovery—hence, from the manner of the attack, it is that we are to estimate the degrees of danger.

CURE. The indications here, are to take off as speedily as possible the spasmodic affections, and afterwards to give tone

to

to the system—and these are done chiefly by the bold administration of opium, and the warm bath ; for opium given in this way has been known to cure when every other remedy has been tried in vain.

The quantity of opium to be given at a dose, and its repetitions, depend upon the violence of the spasms—therefore, from one or two to five grains may be given every hour in any convenient vehicle, and the dose may, according to the urgency of the symptoms, be occasionally increased ; for in these cases it never stupifies—it may be advantageously used with other spasmodics, particularly *asafœtida* or musk, and these likewise must be freely exhibited : glysters also of opium dissolved may be thrown into the intestines, joined with oil of turpentine, dissolved in the yolk of an egg ; and these must be often repeated, particularly if there is any difficulty of swallowing, or the jaws are closed.

The body must, if possible, be kept open by doses of manna, Polychrest, Glauber's, or Rochelle salt, or that of Epsom, formed into emulsions, with oil of almonds and tincture of senna—or castor oil will, perhaps, better answer the purpose. (See No. 97. 98. 99, 118)

With regard to warm bathing, those who recommend it order the patient to lie along the bath, and, whilst they are in it, frictions used—when taken out, to be wrapped up wet as they are in warm blankets, and put to bed, having, whilst there, the abdomen fomented, and a bladder full of warm water laid upon the stomach.

The copious exhibition of bark and wine, two or three ounces of the former, and from two to three pints of the latter, in the space of twenty-four hours, have, from their success, been recommended ; along with which a blister was applied to the back, and two or three ounces of mercurial ointment rubbed into the throat, in the space of ten days.

Cold bathing has also been used with some efficacy, and seemed to answer, though the patients were plunged into the water during the violence of the fits of pain and spasm.—Oil of amber and flowers of zinc have been recommended amongst the powerful antispasmodics in these cases.

From the very different methods used by practitioners in these complaints, which seem, according to our conceptions, to produce such opposite actions on the habit, and both proving successful, I should conclude, that the nature of the habit constitutes the necessity for this deviation.

In constitutions, therefore, which were athletic and robust,
with

with a hard full pulse, I should not hesitate to bleed, and have recourse to the sedative mode of opium, joined with antispasmodics, and warm bathing.

In such as were relaxed, and shewed evident signs of debility, to the stimulant and strengthening: of bark and wine, joined with antispasmodics—blistering—and the cold bath—and in both, to the local application of mercurial inunction.

And when it proceeded from any local affections, cut off all communication between the part affected and the common sensorium, by dividing the nerve, or amputating the part; for this has proved successful, by removing the irritable cause, which sympathetically induces such dangerous spasmodic affections—and in cases of locked jaw, a blister should be applied to the throat.

After the disease is conquered, in order to prevent a relapse, and recruit the strength of the patient, we should have recourse to bark and chalybeates, cold, or sea bathing, and such other modes as we have formerly recommended to people recovering from other severe diseases.

§ 2. CONVULSIONS,

from the Latin word *convello*, to shake or pull, are different in their appearance, though affections of the nervous system, from the former; for in all tetanic complaints the muscles continue for some time in a state of contractility—in these they suffer some agitation, by quickly contracting and relaxing—as if in *tetanus* muscular irritability was so powerful, and the tone of the muscular fibres so strong, as to be capable to continue the contractile force of the muscular fibres, brought on by the increased nervous influence---in *convulsion*, as if there was a deficiency of that irritable power, and the tone of the muscular fibres so much in a debilitated state, that relaxation must unavoidably take place, the muscular fibres, from the want of that strength, being capable of maintaining that action only momentarily—or they may arise from the nervous influence, though more powerful than natural, only being exerted in a less degree; for we find tetanus and convulsion will arise from similar causes, and never run one into the other---hence have they been divided by authors into *tonic*, from *teino*, firmo, to strengthen, and *clonic*, from *kloineo*, moveo, to move or shake.

CONVULSIONS, therefore, are to be considered as affections of the nerves, by which the muscles are thrown into involuntary contractions and relaxations, whilst, at the same time, the faculties of the mind, and the external senses, remain perfect---Now as these, though different in some peculiar appearances, differ

not from epilepsy, but acknowledge the same causes, both remote or inducing, proximate or immediate, and similar methods of cure, we shall proceed to speak of that disease :

§ 3. EPILEPSY, OR FALLING SICKNESS ;

so called from the Greek word *epilambaneſſhai*, diſuper deprehenſi, to be ſeized from above. It has various other names, as *morbus comitialis*, becauſe it was obſerved frequently to attack people whiſt in thoſe aſſemblies called *comitia*—*morbus jacer*, divine diſeaſe, as appertaining to divinity for its infliction or cure--- *puerilis*, becauſe of its frequency in children—*Herculeus*, on account of its violence, and difficulty of cure.

It is a ſudden deprivation of the internal and external ſenſes, with violent alternate contractions and relaxations of almoſt the whole of the muſcles of the human machine, termed convulſive;---of which there are ſaid to be three ſpecies---*cerebralis*, from affection of the brain, when it owes its origin to ſome imperceptible cauſe, preceded by no uneaſineſs, except giddineſs or loſs of ſight---when it ariſes from any manifeſt cauſe, and is preceded by ſome ſingular ſenſation, mounting upwards from different parts of the body to the head it is termed *ſympathica*, as deriving its origin from ſympathetic affections---when from perceptible irritation the fit is brought on, and vaniſhes on the ceſſation of that morbid effect, *occasionalis*.

It differs from convulſion, from being accompanied by total inſenſibility---in its returning at different periods, though not always regular---in its being a chronic diſeaſe, that often, without deſtroying life, continues for a ſeries of years.

DESCRIPTION. The attack of an epilepsy is ſomething like that of an apoplexy, the patient falls down ſuddenly, deprived of all ſenſe : but then they do not, as in an apoplexy, lie quiet, as if in a profound ſleep---in this it is quite the reverse, for the whole muſcular ſyſtem is agitated by ſuch violent convulſive motions, that it is almoſt impoſſible for the attendants to prevent the unfortunate afflicted from hurting themſelves---and ſhould, during the violence of the paroxyſm, the tongue be caught betwixt the teeth, it will be much wounded, bit through, or, perhaps, a portion bit off.

Sometimes the urine, faces, and ſemen, from the violence of the convulſions, will be forced from the places where they are depoſited, and blood will pour from the veſſels of the noſe and ears ; beſides, there is for the moſt part, a good deal of froth foams from the mouth, even in the more ſlight attacks ;---as ſoon, however, as the convulſions ceaſe, the patients lie quiet, as if aſleep ; and, in about an hour or two, recover their ſenſes,
feel

feel sore and fatigued, yet still are forgetful of all which has passed.

Some people have been so expert, as to counterfeit these fits so well, that inattentive observers, though medical practitioners, have been deceived---but we must remark, *that a total deprivation of sense and feeling* distinguish the true epilepsy---if, then, by the application of strong volatile substances to the nose, or suddenly pricking some sensible part, without mentioning the intent, they shew evident signs of feeling, the deception may be made obvious.

Sometimes, before the fit comes on, it will be preceded by weariness, stupor, head-ach, or giddiness affecting the sight---ringing in the ears---frightful dreams, palpitation of the heart, difficulty of breathing---a fullness of, and rumbling noise in, the belly---the patients also will make larger quantities of limpid urine than usual--stammer in their speech, their countenance will be pale, their extremities cold, and complain of a sensation of cold air ascending to the head.

CAUSES. The *remote* or *inducing* are, wounds, blows, and fractures of the skull---any fluid deluging the brain, or filling the ventricles---an inflammation or mortification off the brain---indurations there, or in the membranes---concretions or polypi within the cavity of the skull, carries of the internal surface of the skull---projections of the bony substance pressing upon the brain-- erosions, lacerations, or wounds of the nerves---the retention of accustomary evacuation, too great fullness or emptiness of the vascular system--strong passions or affections of the mind, particularly sudden and severe frights--noxious particles taken into the machine--poisons, or an hereditary taint; for few diseases it is allowed, are so hereditary as this, as it is so easily transmitted from parents to their offspring. For the *proximate* or *immediate causes*, see what has been said in treating of convulsions.

CHARACTERISTIC SIGNS. A convulsion of almost all the muscles of the body, particularly those subservient to voluntary motion--with a deprivation of all sensation, and terminating in a state of insensibility and apparent sleep---to which, according to the opinion of some authors, may be added, a foaming of the mouth, and a strong compression of the thumbs within the other fingers; for these two are by them considered the certain symptoms of this disease.

CURE. As several of the precise causes cannot before death be discovered; or were they, *they* would be irremediable---we must content ourselves with general modes of cure, and depend upon those applications which have, in a variety of cases from
exper-

experience, proved successful---but where the causes are perceptible, and within the reach of our art, they must be particularly adverted to, and removed.

In this complaint, from undiscoverable causes, a variety of medicines, chiefly empirical, have been recommended---*animal oil*, *oil of amber*, (150.)--*flowers of lady's smock*, twenty grains, increased to thirty, taken in powder twice a day--*leaves of the orange tree*, a handful boiled in a pint of water for two doses, or in powder, half a dram twice a day--*blue vitriol*, (139.) twice a day---*ammoniaccal copper*, a quarter of a grain--*bark and valerian*, joined with *cinnabar*, (No. 140.)--*flowers of zinc*, (139.) have been highly spoken of, and said to have performed permanent cures.

According to different constitutional circumstances various methods have been recommended.

1st, Where the fluids have been acrimonious--or, 2d, in a state of fullness--3d, subject to affections of the stomach, from indigestion or sourness--or, 4th, irritation of the intestines, from worms or other acrid materials.

In the FIRST case, courses of *mineral waters*, which best agree with the constitution--*goat's whey*--*sea-water*--*with cold bathing*.

In the SECOND, *issues* between the shoulders, or on the inside of the thighs--*setons* in the neck--*occasional bleeding*--and the body should always be kept open.

In the THIRD, *emetics* given now and then; for they are of service, not only by unloading the stomach, but giving a general shock to the habit; and seem calculated to remove irritation from acrid materials on the origin of the nerves and spinal marrow, or from the dura mater, (26.) which is supposed to be the immediate seat of this complaint.

In the FOURTH, purgatives, joined with calomel, should be administered occasionally, intermediately giving anthelmintics. (106.)

The mind, at the same time, must be kept free from any uneasy sensation or unruly passion--the diet should be light, and easily digestible--gentle exercise--free, clear air, and whatever will conduce to preserve an equable circulation of the blood, and keep up perspiration, ought not by any means to be avoided; for where there is a predisposition to convulsive attacks, any irregularity is greatly conducive to occasion a renewal.

If the fits should be of long duration, mustard poultices and blisters are advised--thrusting a wedge between the teeth to keep the mouth open--this last is said to prevent even the fit, if applied on any warning being given before the fit comes on.

When uneasy sensations are felt in the toes, feet, or legs, creeping

ing upwards, ligatures below the knee in these cases have been knowe to prevent the fit--or, in whatever part these affections may be perceived, applying ligatures above the part so affected.

Some, however, advise, during the fit, not any thing to be attempted, except preventing the patients from hurting themselves, by getting the tongue between the teeth; and they are of opinion, little can be done to shorten the paroxysm.

Amongst the most effectual remedies, I have generally thought musk, and have used it with success, joined with diaphoretics and tonics—and, in order to prevent the accession or return, occasional emetics and aperients.

Inveterate and habitual epilepsies are irremediable, as is that also which is hereditary, if it continues longer than the age of twenty-five.

That species callee the HYSTERIC, OR UTERINE EPILEPSY, "is distinguished from the sex of the patient, from its being intermixed with, or preceded by, hysteric affection—by its following the time of the menses, at its periods—or being brought on by fear, or some such similar cause—and by sensation during the fit, being extremely obscure, though not altogether suppressed.

SYDENHAM says, in this complaint the patients exert unusual strength, bawl out incoherently and inarticulately, and smite their breast; and that women most subject to this disease, are those who have an uncommonly sanguineous habit, and are high spirited.

Obstructed menses are generally accounted a cause of this disease, which makes its appearance agreeable with the periods of this discharge.

Should it happen during the flux, besides those things indicated from their discharge and painful excretion, volatile and antihysteric remedies are required, such as oil of amber, spirits of vitriolic æther, castor or animal oil liquor of hartshorn, camphor, musk, &c. (150.)

If from the menses being obstructed, such things should be administered as are calculated to promote the discharge, as madder-root, (139.) tincture of Spanish flies, (175.) ammoniacal iron, (139.) sabine, (149.) bathing the feet in warm water.

Extract of hemlock, (152.) taken for two months, cured a girl seized with an epilepsy, who for five years had experienced many fits.

Dividing the cartilaginous, or gristly substance of the ear with a knife, not extremely sharp, and thick at the back, so that the division may be large, has been successful, procuring and promoting,

moting, at the same time, a copious evacuation, as long continued as possible.



C H A P. II.

PASSIVE NERVOUS AFFECTIONS.

THE nervous diseases of which we have before treated are obviously of the active sort; but there are others which are associated with inactivity, with respect to muscular motion, and constitute a class of diseases opposite to the former. These are ranked by authors under the terms **DEBILITIES** and **PRIVATIONS**; because of the loss of, or weakened action of particular powers in the constitution, which are the distinguishing characteristics of these diseases.

Dr. CULLEN arranges these under nervous diseases; and are known by that propensity to sleep, muscular relaxation, and insensibility, which are their constant concomitants.

But, in order to give a proper idea of these diseases, we should consider the cause of the three predominant symptoms. If we revert back to what has been said, page 27, on nervous incitability, and muscular irritability, and to the introductory part of nervous affections, we shall not be at a loss to account for two of the symptoms.—As for the unnatural propensity to sleep, it is supposed to arise from the nerves not being sufficiently supplied with their proper fluid, either from a defect of the general mass of this enlivening liquid, or from some compression on the nerves, by which its free distribution is impeded.

Hence extreme cold, excessive discharges of blood—congestion, and over distensions of the vessels of the head, of sanguinary or serous fluid in the ventricles, (27.) and cellular interstices of the brain—extravasated blood within the cranium—depression, or fracture of the skull, forcing it upon the brain, so as to compress the medullary part, and prohibit the circulation of the nervous fluid from thence to the several organs of sensation, and instruments of voluntary motion, may give rise to this symptom of somnolency, or unnatural propensity to sleep.

Now, where this symptom predominates over the rest, those diseases come under the general term **COMATA**, comatous or somnolent,

olent, from the Greek word *koma*, somnus profundus, a deep sleep—and are defined as diminution of voluntary motion, attended with sleep, or a deprivation of sensation.

§ 1. APOPLEXY—APOPLEXIA ;

so termed from the Greek *apopleff*, desuper percussio, to be struck down, is a deprivation of all the internal and external senses and animal motion, except of the heart and chest, attended with oppressed respiration, and sleep more or less profound. It has been divided into different species, from the cause—first, into sanguineous—2d, serous.

DESCRIPTION. *In the first* of these, the apoplectic stroke, at the beginning, is accompanied with a florid, or deep red colour of the face, heat, and full pulse; though, in the progress of it, the heat and colour recede—and, on these accounts, it is understood to proceed from an internal cause—the veins grow turgid, the eyes half open, but not transparent—the respiration tolerably free, though attended with snoring, or rattling noise in the throat—and the pulse full and strong. It attacks more suddenly than the serous, without much previous oppression, or unusual sleepiness.

In the second, from the beginning the pulse is weak, the countenance pallid—the heat diminished, and it attacks old people, acrimonious, phlegmatic, and debilitated habits—and, before the stroke, it is apt to be preceded by an unusual pain, heaviness, and giddiness of the head, and drowsiness—after the attack, the veins are not turgid, the respiration is more straitened, and there is more of the rattling and snoring, with frothy foaming from the mouth, than in the other—and the pulse is neither strong nor remarkably full, but inclines to intermit.

Though the apoplectic fit will sometimes come suddenly on—at others, it is preceded not only by a pain and giddiness of the head, but a general torpor of the senses—slowness of speech—a trembling and stupor of the extremities—hypochondriac and hysteric affections—that oppression in sleep called the night-mare—involuntary flow of tears from the eyes—ringing noise of the ears—and a deeper mode of breathing than is usual.

CAUSES. The *remote* or *inducing* are, surfeits, indigestion—too long exposure to the sun—inordinate drinking, particularly about the age of sixty—strong passions, hysteric affections, convulsions, serous collections, libidinous excess, particularly in old men—repulsion of acrid matter, suppression of urine, salivation interrupted by cold and other causes suddenly—blows and wounds of the head, poisons, noxious effluvia, an hereditary taint--

taint—or, indeed, whatever can increase the volume of blood, or occasion a stagnation in the brain, or produce such effects there as will prevent the nerves from exercising their influence, which is considered as the *proximate* or *immediate* cause.

It generally attacks those who lead slothful lives—are corpulent and full of blood—have short necks, are hard drinkers at advanced periods of life—it is also most common in winter and rainy seasons; and is sometimes epidemic.

The CHARACTERISTIC SIGNS. have been specified, page, 423. line 3.

CURE. Nature has sometimes, by her own efforts, relieved and remedied this complaint, *but seldom*; by producing some copious evacuation, as bleeding from the nose, looseness, or a large flow of saliva, though the cure is generally dependent upon art.

Of whatever nature is the disease, our efforts must be exerted with all possible expedition, to conquer the obstructions, and take off the congestion in the brain, according to the difference of the obstructing cause.

We must therefore, if the constitution of our patient will bear it, bleed copiously, and from large orifices; first in the arm; if no relief accrues, then in the foot; and, should the habit be full of blood, the operation must be repeated.—The application of cupping-glasses, with deep scarifications, to the back part of the head is very useful, to unload more immediately the vessels of the brain—or blood may be taken from the jugular vein, running up the neck into the head—and if the patient recovers so far as to be able to swallow, the evacuating plan must be persisted in—hence quick and powerful purgatives should be administered, (No. 146.)—but, notwithstanding the sanguinary evacuations, should the patient remain in a state of torpor, acrid stilating glysters, (No. 103, 114.) should be immediately thrown up—and, none of these efforts succeeding, blisters should be applied to the legs and thighs—some advise an actual cautery to the soles of the feet, to stimulate and rouse the constitution.

The pulse in these cases is commonly soft, full, and slow; but when it is more depressed and unequal, and the respiration deep and laborious, in proportion to the excess of these alterations, death is nearer at hand.

If the disease be of the *serous kind*, with regard to bleeding, we must act cautiously; it is rarely requisite; if at all—it must be moderate; or leeches may be applied to the temples—quick and brisk vomits are in these cases most eligible, such as white vitriol, (165.) tartarized antimony, (168.) or antimonial wine, (168.)—after the operation, brisk purges should be given, (173.)
—blisters

—blisters applied, and stimulating acrid glysters, (No. 103. 114.)
 —emetic wine, tobacco smoke : and volatiles, should be given pretty freely, (No. 36, 37.) and things similar---and, though in the sanguineous species sternutatories and emetics are prohibited, at least before the fullness is absolutely taken off, for fear of bursting the vessels of the brain, in this case they are highly beneficial.

Some are of opinion, that the compression productive of apoplexy seldom or never deduces its origin from extravasation of serum ; and think, that whether blood or serum is the case, the same methods are to be pursued to accomplish a cure, as bleeding—brisk purging---applying blisters to the back, legs, and thighs---volatiles and preparations of iron internally, out of the fit---a table spoonful of whole mustard-seed, in gross habits taken two or three times a day---mustard-seed or horseradish infused in wine, two ounces to be taken at the same periods, I consider a more eligible medicine after the paroxysm is over ; for it is certainly useful to endeavour to recover the tone of the vessels, which are in these cases apt to be too torpid ; and have been debilitated by too great a degree of distension.

One common remedy, which is said to be efficacious in recovering patients from the fit, has been advised, viz. a handful of salt dissolved in a pint of water, and poured down the patient's throat.

With respect to bleeding, some prefer opening the temporal artery, or jugular vein---and, *when no threatening fullness appears*, leeches applied to the head, or scarifications with cupping-glasses to the hind head, are esteemed preferable to general bleeding.

Blisters all over the feet are recommended by some, whilst others prefer their application to the head---but, in fine, those remedies are most to be preferred, and the places of application for external remedies, which most speedily promote evacuation and remove the torpor or inactivity of the vessels.

I should, therefore, upon the attack, recommend bleeding from the arm, and that repeated, if necessary, till the general fullness was relieved---and blisters, or stimulant poultices to the feet, with purgatives---afterwards local bleeding, and the use of stimulating volatiles---and, in order to prevent a relapse *in full habits*, (60.) the diet should chiefly be of the vegetable kind, light and sparing, that too great plenitude might be avoided---not more than six or seven hours sleep should be allowed at a time---and brisk exercise taken---in lying down, the head should be elevated, and thinly covered---the body kept always open---and all natural and habitual discharges in due order;

for fear any suppressions should take place---hence cold and wet should be avoided, and frictions every night applied to the extremities.

But in weakened and relaxed habits, where the circulation is languid, the vessels sluggish, as in those stiled phlegmatic, (60.) issues and setons, as preventives, are advisable---cathartics and emetics should be now and then administered---brisk exercise, and dry frictions---and courses of steel waters;---and, by way of medicine, mustard, horse-radish, (165.) squills, (176.) ammoniacal iron, (139.) myrrh, (165.) and such like, should be occasionally given.

When this disease occurs from a blow, fall, or some external injury, the patient falls down suddenly, or lies as if lifeless—and, on coming to himself, rejects the contents of the stomach—blood issues from the nose and mouth—afterwards the pulse rises, and becomes frequent and strong, attended with heat.

Large and repeated bleeding is in this case requisite, and the evacuating plan, to relieve the ill effects produced by a concussion on the brain---and, should there be any fissure, fracture or depression, chirurgical assistance is absolutely necessary.

There are two other complaints, one called CARUS, from the primitive Greek word *karos*, signifying a profound sleep---and LETHARGUS, from *lethe* memoria abolita, a loss of memory, and *argos*, ignavus, a kind of state of oblivion—each of which are but a species of apoplexy; and as they require similar remedies, according to the causes and constitutions they attack, little need here be said on these complaints more than what has been advanced relative to the cure of apoplexy.

CARUS is distinguished by the profound sleep from which the patient can scarce be roused, and in which the patient is deprived of all sense and motion, though having easy and free respiration—and the LETHARGY, by the slight sleep, from whence the patient is soon awakened, answering questions which he is asked, moving his posture; but forgetting every thing, however recent; and on account of that sluggishness, which is its concomitant, not caring for, or troubling his head about any thing—attended with increase of heat,—slow fever---a full pulse, often remitting—respiration not quick—paleness and swelling of the eye-lids—and cold sweat in the extremities.

The CATALEPSY, from the Greek word *katalambano*, retineo, from the retention of the position in which the attack is made, seems to be of the same species; but as it is attended with some striking peculiarities, it merits observation.

DESCRIPTION. The patients are suddenly seized with the fit, which returns at intervals—a torpor of mind or body, or

a head-ach precedes—on a sudden they are deprived of all sense and motion, and constantly retain the first posture of the body and limbs, whether standing or sitting, in which they were when attacked—for the most part, after some minutes, seldom longer, they rise as if from a sleep, the head being relieved from its load, and in a proper situation to exercise its functions, though they are totally forgetful of the time which passed in the fit; during which they not only lose all sense and motion; but whatever may be done to them thus afflicted to produce sensation is without effect; for they neither feel, hear, nor see, though their eyes are open, and continue fixed as if upon one object; and when they recover, it is with repeated sighing—still the pulse and respiration appear not affected.

This complaint is of the chronic kind, returns, like an epilepsy, periodically;—sometimes it is simple—sometimes combined with other diseases.

CAUSES. The *remote* or *inducing* are, mental affections—close thinking—suppression of some evacuations—worms—cold—or collection of contaminated serum within the skull.

The *proximate* or *immediate*, an irregular exercise of nervous influence, whereby some of the nerves continue to act, whilst others remain in an inactive state.

CHARACTERISTIC SIGNS. A deprivation of all sensation—the patients maintaining the position of the body and parts in the same state as when they were seized, whilst the pulse and respiration continue as in health.

CURE. During the fit little is to be done, except to rouse the patient to a sense of feeling, by the application of stimulant, volatile, and foetid medicines to the nose—or strong acid spirits—rubbing the neck, spine, and back part of the head with rectified oil of amber and spirits of wine, camphorated solutions, or æther—giving also acrid glysters, (No. 103. 114.)—and if there is reason to conclude any fullness of the head, leeches may be applied to the temples, or the internal part of the nostrils may be scarified.

After the fit, we must have recourse to such things as are calculated to remove the inducing cause—hence, should it be occasioned by *too serious thinking or melancholy*, in which the viscid humours stagnate in, or circulate slowly through the vessels of the brain, we must apply to such remedies as thin the blood, derive it from the head, and are appropriated to bring on an equable circulation—besides glysters and mild cathartics, we must bleed in proper time, advise brisk exercise, a judicious use of the non-naturals with light, easy digestible and stimulating diet,—bathing the feet in warm water—general warm baths—

and courses of mineral waters, or milk whey—with bark, steel, or such other astringents as give strength and activity to the system.

If from sanguinary evacuations suppressed inducing a fullness of the habits, as the menses or the piles—or any neglect or omissions of accustomed evacuations, from setons, issues, blisters, &c. --we must endeavour to lessen the quantity of circulating fluids, by bleeding in the feet—or, if the apprehension of an apoplexy, should strike us, the inside of the nostrils should be scarified—and afterwards the suppressed evacuations should be attempted to be renewed.

Should worms be the cause, to vermifuges we should have recourse, of the milder sort only, as Indian pink root, cowhage, (197.) powder of tanzy, (197.) asafœtida, (149.) rhubarb, (173.) --these promise to be more effectual than the more acrid.

Should it occur from severe cold, and any signs of life remain, the patient should be removed into a moderately warm place---gentle friction should be used, the feet bathed in warm water---and the constitution invigorated by pure wine, and warm cordials.

If from mental affections, medicines will avail but little---the chief that can be done is, to keep the natural evacuations regular, support the strength of the system, and recommend cheerful company, travelling, and change of air.

In general, our plan of cure will consist of the most active stimulants and strengtheners---emetics and brisk cathartics--with blistering and cupping, to which should be had occasional recourse.

§ 2. PALSY---PARALYSIS,

from the Greek *paraluo*, abolito, vel dissolvo, because of the debility and apparent loss of motion and sense attendant.

It is said to be an abolition or diminution of motion or sense, or both, in one or more parts of the body.

When one side of the body is affected, it is called **HEMIPLEGIA**, from *emisus*, dimidium, half, and *pleſſo*, percutio, to strike or affect—when it affects the superior or inferior parts of the body, transversely above or below the diaphragm, (33.)—**PARAPLEGIA**, from *para*, trans, across, and *pleſſo*.

When it affects any particular parts only, as the tongue, the lip, the eye-lid, &c. it is a *local palsy*.

Now all these depend upon the same cause, only it operates upon different parts of the nervous system—for when one side is affected, a compression of one portion of the spinal marrow, (27.) called *crus*, is the seat—when the interior parts of the body, or

the legs and feet only, or the belly also, and all those parts at the same time, which are situated below the diaphragm, the superior parts remaining in a sound state; in the former, the spinal marrow about the first vertebræ of the loins, (32, 46.) is shook, or ruptured beyond the middle of its substance—in the other, from the same vertebræ, it is totally flaccid through the whole inferior part of the spine, and altogether juiceless, so that between it and the bony cavity there appears a remarkable space—or the spinal marrow may be affected much lower down, then the disease discovers itself by inability in walking, and great weakness of the legs and feet.

When *the arms and hands* are affected, the cause sometimes fixes itself within the superior vertebræ of the neck and back, or passes to the nervous parts of the arms, chiefly the wrists.

And in *local palsy*, the nerves themselves of the parts which supply the proper influence to them, in order to perform their functions, are affected; or, perhaps, in slight cases, it may be owing to a defect of muscular irritability; for we know, where, from obstruction, or some other cause in the vascular part of the system, by which the parts themselves will not be properly supplied with blood, they are defective in, or lose their motion—besides, we know great cold will produce similar effects.

DESCRIPTION. Generally before a part becomes paralytic, patients perceive a paleness there—numbness and heaviness of the part—and a want of activity and quickness of motion—after this, the part or parts thus affected are deprived, in a greater or smaller degree, of the power of feeling, or motion, or both—they soon lose their firmness, grow flaccid, and become cold—gradually wasting away—or are subject to a soft pasty swelling—the pulse preserves no regularity—most frequently it is small, soft, and slow, sometimes quick and unequal. In the course of time, very often, nay, indeed, generally in that species where the whole side is affected, the memory fails greatly, as well as the power of reason—nay, indeed, sometimes patients are totally deprived of both.

CAUSES. The *remote* or *inducing* are similar, at least many of them, to what occasion apoplexy, such as sanguinary or serous fullness--suppressed evacuations, inebriety, spasmodic colic, spasms of the inferior parts--a congestion of water or matter among the membranes of the brain--wounds of the spinal marrow or brain--a retrocession of external eruptions, scorbutic acrimony, the division of a nerve, sudden fright, an injudicious exhibition and use, as well as the fumes, of mercury, arsenic, and lead--old age, convulsive epileptic disorders--a flaccidness of the brain, and debility of the nervous system--or touching, it is said, the fish called

torpedo,

torpedo--or, in fine, whatever can prevent the proper power of nervous influence, or destroy muscular irritability---all which will produce the *proximate* or *immediate* causes, before recited, page 428, where also the characteristic signs are specified.

CURE. Whatever may be the cause, our indications are, to endeavour to remove that which proximately, as well as more remotely, contributes to impede the due influence of the nervous power, by intercepting the influx of the fluid in the nerves, by which it is said that influence is promoted; and attempt so to strengthen the affected part, and the whole nervous system, by which their strength and activity may be recovered.

Now, as the hemiplegia and paraplegia seem to be so nearly allied to apoplexy, as they are occasioned by the same causes, only differently situated, that they require similar remedies, we shall therefore only mention them in general, and refer for further particulars to what we have said when speaking on that subject—at least for the recent attacks of the palsy—and these must be regulated by the nature of the constitution.

Such as bleeding in full habits—glysters and purgatives, to continue copious alvine discharges for many days, (though in old people this must not be done) and bathing the feet in warm water—if accompanied with internal spasms, and there should be great commotions of the blood, diaphoretics of the milder class, as antimonials, (180.) joined with absorbents, (191.) and spirit of vitriolic æther, (150.)---should we suspect the blood to be in too viscid a state in these complaints succeeding an apoplexy, myrrh, guaiacum, asa fœtida, ammoniacum, (165.) joined with fixed alkalies, (185.) may be administered, and continued; and also chalybeate waters and liniment of ammonia, or soap, would at the same time, rubbed freely down the spine, be of great use.

In ferous cases, and debilitated habits, emetics should be given, from time to time, in a dilute state, and taken gradually, (No. 11.) or strong infusion of horse-radish or mustard-seed, till their effects are produced as fully as required—and erethines, (157.) may be applied---setons may be cut, and issues, as near the source from whence the parts are affected as possible;---and when the paraplegia arises from some injury in the vertebræ, and at the part there appears a projection, a caustic applied on each side of the vertebræ, and an issue made by that means, is often a certain remedy.

In more obstinate species of these diseases, in order to make a revulsion, and evacuate gradually those humours from their origin, the stimulant aperient pills, (No. 142.) and volatiles u-
nited

nited with some of the stimulant antispasmodics (149.) are recommended, taken in a decoction of the woods, (No. 88.)

With respect to external applications, in order to promote sensation and motion, volatiles—essential oils—balsam of Peru—dry frictions with rough cloths, or flannels impregnated with the fumes of some of the pungent gums, applied to the head, parts affected, and the spine, will be of use.

But the most capital and efficacious are the Bath waters—or, where they cannot be afforded, warm baths, sprinkling, whilst in the bath, upon the part affected, a solution of vitriolated iron. (139.)

Stimulating the parts with nettles has produced good effects, as well as electricity, particularly in local palsies.

The diet of the patients thus affected should be of the warm aromatic kind, taking with their viands freely of mustard, which also may be applied externally, and horse-radish—drinking a glass of mustard wine twice a day—or a table-spoonful of whole mustard-seed may be administered in a glass of wine—they should use brisk exercise—sleep moderately—and live in a warm dry air—cold must be avoided—and connubial indulgencies very rarely gratified.

When the palsy is the consequence of some other complaint besides the apoplexy, whether rheumatism, gout, scurvy, serophula, colic, or the venereal disease, the mode of cure will require some variation, adapted to the peculiarity of the case.

Though these complaints frequently terminate fatally in a short time, yet they sometimes continue for a series of years. When the sense of feeling remains, there is much more probability of a certain recovery than in cases where both motion and sensation are lost. A palsy of the lower extremities and abdomen is for the most part fatal, and often attended with a mortification of the diseased parts.

Should the part, however, be painful, have perception, retain a degree of warmth, and does not waste away or a tremor comes on, there may be some expectations of a recovery; but more particularly if a sensation of creeping or pricking be perceived—sometimes febrile affections coming on have been the means of curing the complaint—and a looseness has been of evident advantage tending to the same end.



S E C T I O N XVII.

MADNESS—INSANIA.

THIS is divided into two species—MANIA, *furious madness*; and MELANCHOLIA, *gloomny madness*. Notwithstanding which division, authors have considered them only as different degrees of the same disease; which is defined an alienation of the mind, or deviation from the rules of sound reason—or a constant delirium without fever.

This doctrine has been long given us by ARETÆUS and TRALLIAN. The *former* asserts, that melancholy is the beginning and origin of mania, into which it glides more from increase than any other cause—the *latter*, that mania is nothing more than melancholy brought to a greater degree; as, on account of their close connection, the transition becomes extremely easy from one disease to the other. And HOFFMAN, imbibing this opinion, advances, that from attentive practice and observation, we learn, that both diseases arise from the same origin and containing cause, and vary only in degree and time of invasion, so that melancholy may be justly received as the primary disease, but mania as its exacerbation and accidental effect—which connection daily and every close observation confirms; for melancholic people, particularly if the disease has been of long standing, very readily fall into mania; which easing, melancholy returns again; although afterwards, at certain periods, they will again be revisited by mania.

DESCRIPTION. The MELANCHOLIC are thus affected—they appear sad, dejected, dull, without any real cause—they are seized with fear and trembling—encouraged with difficulty—are watchful—love solitude—prone to anger, and mutable—enquiring after the most minute trifles, covetous, but soon after simple and profuse—their habits are costly; sometimes having no stools at all; sometimes they are round and dry, surrounded with a black bilious fluid—they make small quantities of urine, and that acrid and bilious—have great flatulence at the pit of the stomach—putrid eructations, foetid and offensive; and sometimes a sharp liquid with bile is rejected—the face is pallid—the pulse is small, dull, and weak—and the sick are at meals extremely voracious.

The MANIACAL, roused to anger, are wild with rage—some run a great way—some bawl out violently—some fly from the sight

flight of men into solitude, and only converse by themselves—some cut and tear their limbs.—In the height of the disease, during sleep they are disturbed with visions, are immoderately lascivious, and openly, without fear or shame, gratify their desires—but when the disease abates, they are quiet, stupid, and sorrowful—also, coming to the knowledge of their malady, they are oppressed with grief at their own calamity and misery.—These are the symptoms which denote the presence, or declining state of mania. The following are such as appear previous to the attack, at least a few of them which have been pretty constantly observed.

The eyes are red and suffused with blood—there is an irregular vibration of the eye-lids—their usual mode of conduct is altered—pride manifesting itself in their countenance, voice, and gestures—they grind their teeth—conceive a hatred for this or that particular person—get little sleep—have violent head-ach, with quickness of hearing—ringing of the ears, and musical sounds. To this place is worthy to be referred the remarkable strength of limbs, and incredible capability of bearing cold, of which maniacal subjects, in the increase of disease, are possessed; also in women, the collection of blood in the breasts. *Besides*, people afflicted with madness are not subject to be affected by any epidemic disease; and are often cured of other complaints under which they labour, or have their progress suspended during their state of insanity.

The greatest part of this description, exact and elegant as it is, has been handed down from ARÆTÆUS, and copied by most of the moderns: and in examining the whole of the symptoms, it will strike us pretty clearly that they must flow from some affection of those parts which are considered as the seat of perception, sensation, and voluntary motion; and these are the different portions of the brain. Even from HIPPOCRATES the idea may have been said to be borrowed, “for,” says he, speaking of the brain, “from this part derive we wisdom, and understanding, hear, see, and know good from bad; and also from this are we insane.”

CAUSES. Those which are considered the *remote* or *inducing* are, *mental* or *corporeal*—the mind being too strongly, or too long continued fixed upon one object—grief, fear, hope, joy, particularly love, totally absorbing the faculties of the mind—ill-founded dread of Divine vengeance, from the false principles of religion;—the membranes of the brain indurated—dryness of the brain---or where the disease is hereditary---too sedentary a life---poisons possessed of a stupifying power---immoderate

libidinous excesses---suppression of natural or proper evacuations---and sometimes it is the effect of preceding febrile diseases:

The *proximate* or *immediate* of *melancholic affections* may be placed to the too great applause of thick blood, to the weakened and flaccid brain, and its stagnation and difficult progress---*but the origin of mania*, and *foundation* to the more violent and impetuous motion of the thick and melancholic blood through the vessels and *fibrellæ* of the brain, or parts of the brain; whence arises, on the one hand, too weak influence, on the other, too strong, of the nervous energy.

CHARACTERISTIC SIGNS. MELANCHOLY, or GLOOMY MADNESS, is said to be a partial insanity without indigestion; or a difficulty of digestion being a concomitant symptom; for we say people are insane, when the relations of things altogether false are conceived in the mind, so that either the passions or actions of mankind may be exerted irrationally, or not within the limits of reason---and it is called partial, because melancholic people will do many things, and think on many points, not with proper or well-regulated judgment; yet in some they act and think with some degree of sound reason.

MANIA, or FURIOUS MADNESS, is universal insanity, where the whole ideas are so generally deranged, that no act, or thought, is conducted within the bounds of cool and deliberate reason.

CURE. All species and degrees of madness which are hereditary, or which grow up with people from their early youth, are incurable; and so, *for the most part*, are all maniacal cases that are above a year's standing, originate they from whatever source they may.

Very often the remains, or dregs of some particular disease, as intermittents, small-pox, nervous fever, give rise to different degrees of foolishness, or madness, termed *amentia*—the cure in this case must be attempted by nourishing diet, clear air, moderate exercise, and the use of wine; not by evacuations, which in almost all other cases of insanity are generally thought necessary, unless the constitution of the patient be such as absolutely to forbid them.

And here we must enquire what kinds the patient can bear best; and these should be proportioned to his strength; else, from being violent, though they may, perhaps, cure furious madnets, they will be apt to bring on incurable dejection of mind, and melancholy.

If patients, therefore, are of a strong habit of body, full, and symptoms of mania from melancholy make their appearance; or, in the earlier stages of melancholy, the vessels shew signs of pleni-

plenitude, bleeding may be had recourse to, either in the arm, jugular vein, and sometimes by cupping, if any affection of the head requires it; or, should the patient's weakness forbid the taking away much blood, leeches may be applied to the temples.

In recent cases though this is generally attended with most success; but if of some continuance, similar advantages have not been derived from it.

In melancholy, however, bleeding must be sparingly used—in mania more freely—and some consider opening a vein in the arm sufficient—bleeding the patient in an erect posture till near fainting—which proves some diminution of the fullness of the vessels of the brain taking place.

Vomiting, in weakly people, with ipecacuanha, (168.)—in the more robust, with antimonial wine, or tartarized antimony has been thought preferable, (168.)—in mania it may be a doubtful remedy, by determining too freely to the head, in melancholy it may be more freely used.

Purgings is extremely useful---the most efficacious cathartics have by some been thought infusion of senna, (No. 106.) quickened with one or two drams of the tincture of jalap, instead of tincture of aloes, and senna—but the frequent use of cooling purges have, from experience been recommended. (No. 147, 148.)

But should there be an obstruction of the menses in women, or the piles in men, a reproduction of these evacuations are thought necessary—the aloetic purges, (173.) (No. 106. 108.) then will be the most proper—and these evacuations by vomit and stool require to be alternately repeated.

Diuretics have been considered by some of the greatest moment, especially if any degree of fever should accompany insanity—but this will happen more in maniacal cases; for melancholic subjects, for the most part, make too much water—the most proper diuretics are, the vegetable alkali prepared, (191.) and the diuretic salt, (176.) and these may be given in large doses alternately, two or three times a day.

Besides these, discharges by the pores of the skin are to be promoted.

HOFFMAN particularly recommends the warm bath, who has seen numerous instances of melancholic and maniacal cases cured by this means. Dr. CULLEN is of a contrary opinion, and has found it rather hurtful to maniacs—though to rigid melancholic habits it may be useful, or exhibited in form of a partial half bath, pouring at the same time cold water upon the head and superior parts of the body.

From camphor having been said to prove successful in forming radical cures, Dr LOCKER gave it in large doses, but without success—though he found camphor dissolved in vinegar had good effects—he thought then the efficacy might depend upon the vinegar—he gave one ounce and a half of distilled vinegar every day, after having first prepared the patient by bleeding and purging, which he sometimes occasionally repeated—eight by this method, and none of them took more than from six weeks to three months, had the cure completed. He recites the following effects, soon after they began the use of vinegar—*their eyes lost their wild staring look, and presently after became calm and quiet, it acted chiefly by sweating; and the more they sweat, the sooner they were cured—the menstrual discharge in such as were obstructed, or had too little of this salutary evacuation, was promoted or increased.* From this account, and from the simplicity of the medicine, it ought certainly to undergo farther trial.

Blistering the head has been thought useful—and, perhaps, it may, says Dr. MEAD, in cases of long standing; but, in preference, he recommends shaving the head after the manner of the ancients, and rubbing it often with warm vinegar; and also passing a seton in the nape of the neck. Dr. CULLEN is of a contrary opinion, for he says, “in recent cases, blistering the head has been found useful in inducing sleep; and when it has this effect, the repetition is proper—but in maniacal cases that have lasted for some time, blistering has not appeared to be of any service”—and in such cases he has not found perpetual blisters, or any other form of issue, prove successful.

However, setons and issues I consider in all cases of mania extremely serviceable, by preventing a fullness coming on the habit, from the constant drain, and this in an easy and gradual manner.

A frequent use of the cold bath in cases of mania is very serviceable; for CÆLUS says, nothing is so beneficial to the head as cold water. In order, though, to render this remedy the most effectual, the maniac should be plunged into the cold bath by surprise, and detained in it for some length of time, frequently pouring cold water upon the head; so, with the assistance of fear, a cooling effect may be brought on—this has often been useful; as has also the application of ice, snow, or the clay-cup to the naked head.

To procure rest, Dr. MONRO used to give two drams of borax, camphor, musk, and other medicines of that class, have been preferred to opium, in order to procure sleep; for in maniacal cases opium is usually forbidden—but there are instances, where,
in

in large doses, it has proved a cure--and, perhaps, if it were tried oftener, more powerful effects may be derived from it---and after large evacuations and proper bleeding, and where there was no appearance of inflammatory affections of the brain attending mania, and the patients were restless, I should not hesitate in having recourse to it, for two or three times; which, should it be found to exasperate the disease, might be easily left off---if otherwise, the effect would authorize the pursuit.

Constant and hard labour has been recommended; because it is said, forced attention is a very certain means of diverting the mind from pursuing any train of thought; and from hence its utility--also a journey carried on for any length of time; during which, complete cures of mania have been known to be effected, from diverting the attention from disagreeable and painful affections.

These are the remedies which are generally applied in cases of mania, or in such cases of melancholy as seem to be approaching to that state--but there are some deviations necessary to be observed where insanity is in its primary state, without such apparent tendency.

In both cases, however, costiveness ought to be avoided by the use of gentle aperients, particularly in melancholy, the drastic purges are better omitted.

Blood-letting will here be seldom necessary, except under the particular circumstances before specified. (p. 434.)

Warm bathing is also preferable to cold bathing; because we consider here the nervous system in too torpid a state, and requires the fluids to be solicited externally, and not thrown too much internally, lest want of proper incitability of the nerves should permit the internal parts to be too much loaded, from the vessels being incapable of producing re-action adequate to the external force.

Nor should opium in cases purely melancholic be had recourse to; for the action of its sedative power would contribute to add much to the nervous torpor.

The diet in maniacal cases ought to be perfectly light and thin, and such as is neither stimulating nor nourishing---hence vegetable diet is the most proper---but should in melancholic cases be used with caution, as, where the stomach is torpid, such viands are apt to occasion symptoms arising from indigestion.

As nothing is more conducive to the recovery of patients labouring under insanity than proper management, to this point much attention ought to be paid; and in the two states of the disease different modes ought to be adopted.

The violence of the mania is to be restrained, and the despondency

pondency of the melancholic to be dissipated---*the former* we are to keep in subjection by chiding and threatening---and it must be remembered, that mad people are always cowardly, and can be awed by the look of a very expressive countenance--and when those who have the charge of them once can impress them with the notion of fear, they will readily submit to any thing required--and this is much better, and infinitely more humane than beating them, or chaining them down in dark cells or rooms, as was formerly the custom when they were outrageous--the strait waistcoat, or tying their legs down to the foot of the bed, if the former succeeds not, will be sufficient for preventing them from injuring themselves or others.

The latter should be encouraged and soothed, and diverted by concerts of music, or any other pleasing entertainment, in which they have been known to take delight whilst in their rational state.

A mistaken humanity often prevents the friends of unfortunate insane people from putting them under the care of strangers, and sending them from home---this, however ought to be complied with, for, whilst at home, and amongst their friends, the cause and continuance of unpleasing ideas are apt to be too frequently renewed, and subjection is infinitely more difficult to be acquired; still, the prevention of the one, and the attainment of the other, are essentially necessary.

In these cases the head is apt to be affected with fullness; therefore, where circumstances will permit, the patients ought to be kept as much in an erect posture as possible---indeed, should there be no perceptible symptoms which indicate such a preternatural fullness, or an increased force of the blood-vessels in the brain; for an horizontal position always augments the fullness and tension of these vessels, and therefore may increase the too-powerful action of the brain.

To prevent a relapse, which is very apt to recur, the plan of medicine and diet here laid down ought to be repeated for a considerable time, at proper intervals, after the patient has recovered---and chalybeate waters and the cold bath will also be highly proper, to strengthen the whole frame, and prevent a return of this unhappy disease---from which to relieve our patients must afford satisfaction inexpressible.



S E C T I O N XVIII.

AFFECTIONS OF THE LUNGS.

§ I. COMMON COUGH, OR TUSSIS.

THIS complaint is so common, and so often experienced by almost every individual, that a minute description seems unnecessary ; but as from neglect it may be, and is frequently, attended with disagreeable consequences, it will be useful to see how these originate, in order to shew the necessity of attending to this complaint, though apparently trivial, and taking it off by the readiest and easiest means, in order to prevent subsequent mischief ;—to this, which is occasioned by what is called catching of cold, and the whooping, or convulsive cough, we shall confine ourselves.

And of the first we say, a cough is a concussion of the lungs repeated at uncertain periods, induced by some irritating cause acting on their internal surface, or that of the windpipe, (29.) occasioning quick reiterated action of the muscles of the ribs, diaphragm, (33.) and belly; and this irritating cause by some means obstructs perspiration, and determines the matter, which should pass off by the perspirable pores, too freely to that organ, or part leading to it—and chiefly, as it is termed, from catching cold, for the most part attended with hoarseness, running of the nose, sneezing, chillness, and sometimes with slight degrees of febrile affections. People thus affected generally cough up mucus from the lungs, now and then of a yellowish colour, and viscid; which, when expectorated, puts a period to the fit of coughing for that time.

From what has been said, the indications of cure will be obvious.

To remove the irritating cause, and guard the lungs, so that, till it is removed, they shall not feel too sensibly the effects of that stimulus—and these are performed by restoring perspiration—evacuating the morbid mucus, sheathing its acrimony, rendering the lungs insensible to its effects—and giving proper strength to the vessels of the lungs; for, by the repeated shocks and distension, they become debilitated.

And these will be accomplished, for the most part, by very easy means—by avoiding cold—keeping the breast warm, by wearing

wearing flannel over it, drinking warm liquids in the morning, and at meals warm water, or inhaling the vapour—taking the compound decoction of barley, linseed, or bran-tea, with honey and nitre—or drinking at night barley-water, sweetened and warm, in which is dissolved the yolk of an egg, or taking any gentle diaphoretics, (178.) or small doses of antimonial powder, (180.)—these, or some of these, early applied, will readily prove effectual.

But should the complaint be obstinate and violent, bleeding may be necessary, and a spare diet—saline, and antimonial medicines may be given, (No. 6 to 9.) to which may be added camphorated tincture of opium, (152.) or nitrous medicines, (No. 2.) may be joined with antimonials, and some of the liquids before spoken of adhered to—the body should also be kept open, and the urinary discharge promoted, by gentle aperients and diuretics—linctuffs and emulsions, (No. 81 to 84.) may also be occasionally administered; and are very useful, if swallowed gradually, particularly should there be a tickling upon the top of the windpipe, which sometimes appears to be the principal cause of a cough, especially in the beginning.

At the latter end of the complaint, if the cough should continue, though not violent, but come on now and then, and there should be expectorated tough, viscid mucus, the ammoniacal mixture, (No. 141, 143.) given three or four times a day, I have found serviceable, not only in promoting an easy expectoration, but strengthening the vessels of the lungs—and where I find people subject to frequent returns, after the cure, benefit may be derived in the prevention, by bark given twice a day for a little time.

During the severity of the complaint the patient should be advised to keep much within doors, avoid the night air, be rather warmly clothed—particularly keep the feet warm—and by these means success is certain.

But should the complaint be long neglected, from the repeated stresses laid upon the lungs by continually coughing, hard glandular tumors, called tubercles, are *not rarely* formed—sometimes the vessels of the lungs are ruptured, by the blood being so often too forcibly thrown into them—in both of which consumptions have been the consequence—the cough then begins to put on another aspect, and induce a disease of a very serious nature; for the relief of which the reader is referred to Pulmonary Consumption. (331.)

§ 2. HOOPING, OR CONVULSIVE COUGH.

It is so called from the violence of the convulsions, and that particular

particular noise of hooping which is observable in the fits of coughing—also CHINCUGH, from the Dutch word *kincken*, to pant—in medical language TUSSIS CONVULSIVA, or PERTUSSIS.

DESCRIPTION. In the beginning chiefly there is a dry cough, in which there is not thrown up any, or a very small quantity of thin serum, more or less acrid—sometimes the cough is moist, and then a blackish or blue mucus, often extremely tenacious, is evacuated---at the same time, the extremities grow cold---the bowels are costive---the urine is thin---and the blood is forced up copiously, and with great force, into the superior parts, breast and head; from whence, during the fit, the face grows turgid with blood---the veins swell---the arteries beat stronger and quicker---the eyes appear prominent---the tears flow---the eye-lids puff up---and sometimes the blood, particularly if a sneezing comes on, is forced out from the nostrils---sometimes the vessels of the lungs are ruptured, and there arises a spitting of blood---a hiccough often accompanies it, and very often vomiting.—With respect to the convulsive affection, it does not appear generally till the second or third week from the attack; till that time, it appears like a common cough, and then it comes on at different times of the day, and continues till some mucus is thrown up by the lungs, or the contents of the stomach evacuated, and then it ceases—when it has put on these appearances, its time of continuance is uncertain; it may go off in a few weeks, or remain some months---Before the fits come on there is some warning given, chiefly an uneasy sensation in breathing, and children will at this time catch hold of any thing that is near them, in order to support themselves during the fit of coughing, which they dread.

But there are some cases where this arises from a peculiar infection, that appears only like a common catarrh---still it is most commonly, indeed, almost always, with a peculiar kind of sound, different in different cases, during some parts of the coughing called *hooping*, occasioned by many expirations being convulsively made, rapidly succeeding each other, whence a great quantity of air must be thrown out of the lungs; which circumstance necessarily requires a full inspiration to succeed---in this act the air rushes with unusual rapidity through the superior part of the windpipe, and occasions that particular noise, which forms the striking and characteristic marks of the disease.

Various have been the opinions of authors respecting the seat of this disease---but if to what we have said, the occasional or accidental causes, which are apt to bring on the fit, be added, such as violent exercise---full meals---food difficult of digestion

—irritation of the lungs from smoke, dust, or disagreeable odours---strong passion---or other considerable emotions of the mind---the relief occasioned by vomiting or expectoration of mucus freely, and the propensity to coughing being less when the stomach is empty---we shall not hesitate in concluding the lungs or the windpipe are the parts of the constitution affected; and that predisposition in the parts to feel the effects of peculiar infection form the immediate causes of the disease, and also authorize us to say,

That the HOOPING-COUGH is a reiterated and violent convulsion of the pulmonary organs, induced by the convulsive action of the muscles of ribs, diaphragm, and belly, brought on by the stimulus of peculiar infection acting upon the lungs or windpipe, attended with a sense of strangulation, repeated sonorous inspiration, and often with vomiting and expectoration.

CURE. The indications of which are, to correct or evacuate the peculiar infectious matter---to alleviate and lessen the violence and duration of the cough—and prevent those mischiefs which are likely to arise in the habit, or parts of it, from its excess.

But as we know of no means either to correct or clear the constitution of the morbid matter creating the disease, on these we can make no attempt—we must therefore imitate nature in her efforts, by such means as experience, founded on the knowledge of the laws of the animal œconomy, will point out to us, in accomplishing the two succeeding indications.

In full habits, therefore, if the face swells much in coughing, looks red, and also the eyes, and other appearances of local plenitude shew themselves, bleeding is essentially useful; and this must be repeated so long as such appearances render it necessary—but this must not be pushed too far; for then we should increase the convulsive affection—hence, in the slighter kinds of the disease it may be omitted—the body should be kept moderately open, not less than two or three stools procured every day—violent purging, for the reason above recited, might be hurtful.

Gentle vomiting every day is beneficial, in the forenoon, by small doses of antimonials, one or two spoonfuls of the emetic mixture, (No. 11.) for a dose, or as much as will produce the effect—and should any feverish symptoms attend, a quarter or half a grain of tartarized antimony may be given at night with the powder, (No. 2.) lessening or increasing the dose according to the constitution; for this mode not only does good by the shock it gives to the habit, assisting expectoration, and clearing the stomach, but by determining the fluids to the surface, promoting perspiration, and keeping the body open; which last if it does not do, a little magnesia, or some other cooling purgative

sive must be added—by persisting in this mode, till evident symptoms of amendment presented themselves, then omitting the vomit to every second or third day, afterwards giving it once or twice a week, has been crowned with desired success.

But, notwithstanding, should symptoms appear indicative of an inflammatory tendency on the lungs, which will be shewn by difficulty of breathing, fever, and quick pulse, where no coughing for some time has preceded, blisters then should be applied, particularly on the chest.

Rubbing the pit of the stomach, and down the spine, with equal parts of rectified oil of amber and spirits of wine, where there has been no inflammatory symptoms, or febrile tendency; or after these had gone off, has been considered of great use; but bleeding and purgatives, when necessary, have preceded their use.

Small doses of hemlock, (152.) have been given with apparent success; and is by much the best amongst that class stiled specifics.

Towards the close, where mucus appears viscid and difficult to expectorate, the ammoniacal mixture, (No. 141. 143.) is not an unprofitable medicine.

The stimulating tonic mixture, (No. 144.) has been spoken of with exaggerated praise, but I think too indiscriminately—early in the disease I would never recommend it, particularly in full habits with an inflammatory tendency—though in the latter stages, where evacuates have preceded, I have given it with apparent advantage—and, perhaps, in weak, delicate constitutions, it may be exhibited at an earlier period in small doses two or three times a day, till a slight strangury is excited—the dose may either be diminished, or given at longer intervals.

However, in the general mode of management, I should, in the beginning, recommend vomiting and aperients, with bleeding, blistering, and use of antimonials, if necessary—small doses of cicuta—and where no febrile symptoms declared themselves, external antispasmodics.

When the symptoms had considerably abated, tonics, particularly bark, should supply their place.

And, in the first period, the diet should be abstemious and sparing, as in inflammatory fever, if the symptoms ran high.—In the second, the mode of living should be more generous—and should the lungs be weakened by the violence of the disease, a course of ass' milk, riding exercise, pure, clear air, and the use of bark, would be proper.—Indeed, in some cases,

change of air is highly necessary, and very often alone produces the most salutary consequences.

We must observe here, that often, when the coughing fit is over, the patients are almost always perfectly relieved; but should they not, and the difficulty of breathing should continue, and there be any considerable febrile affections, there is danger, which must ever be suspected; for few die but under these circumstances---now and then bringing on immediate suffocation, and sometimes consumption---and often attended with extremely troublesome and painful affections; but it will sometimes occur in so mild a state, that all fear is unnecessary---and this will manifest itself by the gentleness of the symptoms; for though the complaint should be completely existing, accompanied with its certain symptoms of convulsive cough and hooping, if these should be moderate, and their returns observe distant periods---if the ejection of mucus from the lungs should be in no great degree---the difficulty of breathing and febrile affections do not manifest themselves---and between the fits the patient preserves his common habits of health, and the symptoms gradually decrease, nature will be her own physician---in these cases little is necessary to be done.

§ 3. ASTHMA.

from the Greek word *ao vel acmai*, anhelio, to breathe with difficulty. Though authors have divided this disease into different species they may all properly come under one head, considering them, as they truly are, the same, only differently circumstanced; or arising from other diseases in the habit, and merely symptomatic; we shall therefore consider them under one head, as asthma in its different states, whether periodical, continual, or acute.---If the difficulty of breathing returns periodically, it is termed ASTHMA---if it is chronic or continual, DYSPNÆA, from the Greek word *dys*, difficulter, and *pneo*, spiro, to breathe---if it is acute and violent, comes on suddenly, and soon terminates, and returns not again, ORTHOPNÆA, from *orthos*, rectus, upright, and *pneo*, spiro, because the patients can only breathe in an erect posture.

DESCRIPTION. Before the difficulty of breathing comes on, patients complain of a tightness in the region of the stomach, which is distended, and wind passes in considerable quantity upwards---they then begin to be hot---are heavy and dull, complain of a pain of their head, are sick, and make a quantity of pale urine, their spirits become depressed, the lungs feel a degree of inactivity and stiffness---the breast is more than commonly load-

ed—they grow hoarse, are sick, breathe with great difficulty—and experience almost universally a kind of stupor, from the contracted state of the chest, inspiration and expiration are performed slowly—and, indeed, so uneasy are they in the execution, that they elevate their shoulders, and extend their necks, in order to get relief in their manner of breathing—very frequently they vomit materials of different kinds—sometimes viscid slimy mucus, sometimes green or yellow bile—in the violence of the fit, they have a palpitation of the heart, a livid colour of the face, and feel as if they should be suffocated—when the spasmodic constriction remits, they spit up viscid phlegm, which tastes differently, intermixed with which are black coloured streaks—the urine now changes its colour to a deeper hue, and deposits a sediment—all the symptoms increase at night, and are worse in bed—patients feel most alleviation in the open air—as soon, however, as the paroxysm goes totally off, the expectoration ceases.

From this account, though concise, it appears, that whatever will impede the passage of the air into, or the free circulation of blood through the lungs, either by affecting the lungs themselves, or diminishing the capacity of the chest, will produce this complaint—hence the *remote* or *inducing* CAUSES are, thick, dense, foggy air—or air impregnated with noxious particles or vapours received into the lungs—the aperture of the glottis, (the narrow slit at the upper part of the windpipe,) being so contracted, or closed up, and the passages leading to it from the parts about the fauces being much swelled, and the investing membranes covered over with a mucous or purulent exudation; or themselves greatly thickened; or the aperture may be shut by the muscles of the windpipe being affected with spasmodic contractions, which is not seldom the case—accumulations of watery, purulent fluid collected in the cellular substance—earthy concretions, or schirrous tubercles formed in the lymphatic glands dispersed through them—tumours lying contiguous to, or adjoining the lungs—extraordinary quantities of fat collected in the chest, particularly about the large blood-vessels—too copious secretion, or a deficiency of the mucous which lubricates the branches of the windpipe—blood issuing from the extremities of the arteries into the air vessels—by an over distension of the blood-vessels in the lungs—spasmodic affections or pain affecting the the muscles destined for respiration, especially the diaphragm, (33)—spasmodic contractions of the branches of the windpipe from internal causes—collections of water, blood, and matter within the cavity of the chest, swellings of the belly from dropical collections, enlarged viscera, or from a foetus—and, indeed, from an unnatural small-formed chest—strong passions, old ulcers healed,
any

any accustomed or critical evacuation thrown back into the habit---wounds of the diaphragm, with a variety of others---and according to the nature of the acting causes, so shall we find the nature of the disease—but as in a work of this kind we cannot go into the minute particulars, we shall confine ourselves to two; of one or other of which almost all asthmatic complaints consist, viz. the *humid* and *spasmodic*; or *convulsive*.

CHARACTERISTIC SIGNS. A difficulty of breathing, with straightness of the chest---sometimes continual, at others periodic---and sometimes acute, violent, and not subject to return.

DISTINCTIONS. Such as are affected with the humid, or moist asthma, are seldom free from cough, and, before the accession of the fit, they have some signs indicating its approach, as languor--loss of appetite, oppression, a flatulent fullness of the stomach---after these there comes on a violent difficulty of breathing---there is no certainty of the duration of the fit, as it is from a few hours to three, four, or more days-- still the sense of suffocation and difficulty of breathing is so distressing, that the patients are scarce able to lie, speak, or expectorate---yet an inflammation of the lungs seldom succeeds the fit, notwithstanding there appears such violence affecting that organ--as it terminates, the breathing begins to be more free---mucus is expectorated---the urine changes to a darker colour, and deposits a copious sediment.

From the humid asthma, the dry or convulsive is distinguished, from the suddenness of the attack--a pain and cramp affecting some part of the breast, particularly if any part of the breast has been injured formerly by a wound or blow---from the violence of the symptoms---but the most certain sign is said to be, if a convulsion of any other part be present, or has preceded.

Indeed, both these species may be considered, and not improperly, of the nervous class; one having associated with it an accumulation of viscid phlegm in the lungs, the other free from such a congestion.

CURE. In full strong habits, in fits of the asthma, bleeding may be had recourse to; and, if the constitution will bear it, and the continuance of the violence of symptoms require it, it may be repeated---but in those which are delicate and debilitated, or far advanced in life, it is more judicious to omit it--as soon as possible afterwards, the glyster, (No. 26.) in which from a half to a whole dram of *asafoetida*, or more, may be dissolved, should be administered---and if these do not in a short time prove efficacious, a blister should be applied between the shoulders.

Vomits should be administered, (No. 11, 12. 38.) either with
answer

answer the purpose ; but not till expectoration comes on with some degree of freedom ; for, in the height of the fit, they might produce mischief, by creating too great an accumulation of blood in the head, and occasion not only dangerous, but fatal symptoms---indeed, if the stomach is loaded with any kind of foulness, vomiting will often prevent the asthmatic fit.

A strong infusion of roasted coffee has been known to alleviate the fit.

In order to promote expectoration, emetics should from time to time be given, and compositions formed of the attenuating gums, (No. 141. 143. 145.)

Garlic is useful, (165.) or extract of tobacco, (153.) is supposed to be capable of being so managed as to exceed all the rest of our medicines for this purpose : for tobacco chewed by those unused to it till it has brought on sickness, and then going to bed to sweat ; afterwards repeating it, has, we are told, cured the fit.

Squills, (176.) mixed with other expectorants, (164, 165.) increase their power, or are themselves active ; and also soap mixed with the gums before mentioned.

And in all cases where the body is costive it should be kept gently open ; for which purpose the pills, (No. 108, 109.) may be used.

If opiates dare be administered in the humid asthma, they should always be coupled with expectorants and volatiles---to which end, drops of opiated tincture and salt of hartshorn may be added to the foetid attenuant mixture, (No. 145.) for these may prevent the opiates from making the mucus too viscid, or hindering expectoration from going on.

Diuretics are also beneficial, particularly in those who have an acrimonious state of fluids.

Though very great caution is necessary in the humid asthma in our exhibition of opium, yet in the spasmodic species it may be given with more freedom ; though it should be joined with such aperients as will keep the body open.

Cold bathing in an artificial salt bath, or in the sea, which is the most eligible and certain, has proved efficacious in those asthmas where, from the predisposition in the lungs to become irritable from slight causes, this complaint was brought on, except some peculiar circumstances forbid the use, as tubercles, dropsy of the chest, ulcers in the lungs, &c. &c.

Some have been said to die suddenly from suffocation in this disease ; but this has generally been found to be from polypus in the lungs---partial palsy, or some species of dropsy, has been its termination.

Issues in both species are recommended in the inside of the thighs just above the knee.

Light diet, easily digestible, and not flatulent, is the most proper; and riding on horseback ought not to be dispensed with, because it is always extremely beneficial.

With respect to situation, the patients ought to be left to themselves, and fix in that in which they are most lively and comfortable, and wherein they can breathe with the greatest freedom; for I have known the air of London more salutary to some than the purest in the country.

Those of sanguine habits, with straight chests, who have been subject to frequent coughs, are most liable, in the latter part of life, to fall into asthmatic complaints, particularly if they are gross and fat--and it rages more in summer and autumn, than in the winter.

We shall find, by the enumeration of the remote causes, this complaint may be the consequence of others, and is itself, therefore, purely symptomatic---to the original disorder we are to advert, at the same time that we use modes proper for the alleviation of this distressing symptom:

§ 4. SUFFOCATING CATARRH—CATARRHUS SUFFOCATIVUS.

We must be careful not to confound this with the TRACHEAL QUINCY, or CROUP, (p. 317. 320,) because some authors have given the same name to this: notwithstanding, we shall find them widely different, and that they require different modes of cure—*that* being an inflammatory affection of the branches of the windpipe, requires bleeding, which might be highly serviceable—*this* being spasmodic, bleeding would be as injurious.

DESCRIPTION. In this complaint there is a peculiar kind of shrill croaking, accompanied with a quick and difficult breathing, attacking violently and suddenly, and generally in the night—from the singular noise, we may easily distinguish it from inflammatory affections of the lungs, which never attends them, and always makes its approach more gradually.

CHARACTERISTIC SIGNS. A suffocation arising from a spasmodic constriction of the lungs, or rather windpipe, or a spasm of the diaphragm, without hysterical affections.

CURE. We must here endeavour to take off the spasmodic affections as soon as possible, by blistering the back, and the copious use of asa foetida, giving glysters of a solution of this gum, and pouring the same down the throat: and if the fit abates, or is conquered by these means, bark must be given freely, to prevent a return.

To

To a child eighteen months old, some have given an ounce of *asa foetida* in solution, and injected as much by glysters, in the space of forty eight-hours.—In so short a time it will probably be very difficult to get a child so young to swallow so large a quantity.

However, in smaller doses it has been equally efficacious—alternate doses of musk and *asa foetida* will answer the purpose, in conjunction with the glyster.

This disease is often met with in children, and is in some seasons epidemical—but it very frequently proves so suddenly mortal, that medical assistance is of small consequence.

§ 5. SPURIOUS PERIPNEUMONY—PERIPNEUMONIA NOTHA.

from the Greek word *notos*, spurious.

There have been different opinions concerning the seat of this complaint, though all agree respecting the affection of the lungs, yet differ with respect to the part—some assert that it is the small branches of the pulmonary arteries, and those of the windpipe—others, that it is in the cellular substance of that organ, that is, the membrane which connects together all the parts of which the lungs are formed, and is the same connecting medium which unites the smallest fibres of the body with each other. See Lungs and Cellular Membrane.

I confess myself of the latter opinion; for, though expectoration has been carried on freely in this complaint, the patients notwithstanding have died, which is not the case in humoral asthma, or the inflammatory peripneumony, where the air vessels, or the small branches of the pulmonary artery, have been affected; for, under these circumstances, the lungs have an opportunity of freeing themselves from the oppressive load, by the free communication those parts have with the windpipe—whilst, on the other hand, in order to form a cure, the offending matter must be thinned sufficiently to be re-absorbed by the lymphatics, and carried back into the course of circulation. We have thought it necessary to premise thus much, in order to furnish a perfect idea of the complaint, which, we think, will farther be corroborated by the symptoms and consequences.

DESCRIPTION. In this complaint, though there are chillness and heat alternating with each other, yet neither is the heat, pain, or thirst, in any great degree—the pulse is frequent, weak, and small—it is often attended with, or there is a strong propensity to, vomiting—giddiness or pain affects the head—the patients cough, and experience a sense of weight in the breast, with a difficulty of breathing, and tightness within the chest—and,

for the most part, the urine is of a pale colour—in some cases they expectorate tolerably freely; but even then the difficulty of breathing abates not, but they still wheeze and feel themselves oppressed; and, when that is the case, we must be very careful not to prognosticate too favourably; for the fatal cause still exists, and most commonly terminates in death.

CAUSES. An accumulation of serum in the cellular substance of the lungs—hence arises great oppression on the air vessels, and some slight obstruction on the pulmonary and bronchial arteries, thereby hindering a full and free circulation of the blood through the substance of the lungs—to which old people, those who are phlegmatic, weak, relaxed, and fat, are most subject—and these it attacks most frequently in moist, foggy, and rainy seasons.

CURE. The indications are, to dislodge the contaminated serum, and throw it out of the constitution, by making it sufficiently thin, so that it may be absorbed from the cells where it is lodged—and this we must attempt by emetics and stimulants; for on these we can alone depend for saving the life of the patient.

The antimonial emetics are the most proper, (No. 11, 12.) given in such a manner that the shock and agitation may be most powerful—hence administered on the stomach being empty, or nearly so—the arms, back, sides, and legs should be fomented, and blisters applied to them—mustard whey, (No. 127.) decoction of seneka root, (179.) have been thought useful—when the cough has been violent, gentle opiates, joined with aloetics, have been admitted—volatile saline mixture, (No. 126) coupled with nauseating doses of antimonials, in order to promote expectoration, have been advised, and may, perhaps, be useful to remove obstructions formed in the small branches of the blood-vessels of the lungs, occasioned by the external pressure of serum collected in the cellular substance; but they touch not the grand cause; for though these, or the application of some of the attenuating medicines, such as camphor, vinegar of squills, gum ammoniac, may cause expectoration; in spite of all our endeavours, we very often, indeed, most commonly, see death ushered in, by a perpetual laborious wheezing—great restlessness and anxiety, intolerable oppression at the pit of the stomach—a constant drowsy disposition—coldness of the hands and feet, and a livid colour of them as well as the face, owing to the blood there stagnating.

In phlegmatic and relaxed habits, issues on the inside of the thigh above the knee may act as a preventive, by hindering a serous accumulation taking place in the cellular substance of the lungs, by affording a continual drain to the constitution; but in the fit of the disease, though advised by some, can afford no relief,

rief, from the slowness of their action. The body should always be kept open by glysters, whatever mode we pursue : and we may venture to assert, that if emetics, blisters and the use of volatiles, will not afford relief, medicine cannot be of much service.

We must be very careful in distinguishing this from the true peripneumony, which may be readily done by remembering, notwithstanding there may be some similar appearances, that *in the spurious peripneumony there is no acute fever*—add also from the dry ASTHMA, because that is never attended with any fever ; in this a slight fever manifestly shews itself, though far more obscure than in the inflammatory peripneumony.

We should have observed, that in all diseases where a cough appears to be a prevailing symptom, mucilaginous and oily compositions are freely exhibited—here though they must be avoided, as must also opiates, except under circumstances which we have before specified.



S E C T I O N XIX.

WE now come to speak of those diseases wherein the humours of the machine are particularly concerned, owing to some error in point of quantity, or quality, or both, wherein they deviate from their natural state, and from thence produce a variety of diseases—the first of which we shall specify is

§ I. JAUNDICE ;

from the French word *jaune*, yellow—it is also called ICTERUS, from the Greek *ikteros*, *aurugo* vel *aurigo*, which name it bears, from the appearance of yellowness like gold—MORBUS REGIUS—MORBUS ARQUATUS—SUFFUSIO BILIS, from bile being suffused over the habit—this, therefore, is considered as a disease produced by the bile either obstructing the common duct of the gall bladder, called *ductus communis choledochus*, (36.) by its visciduity, or concreting into a hard substance, named gall-stones—though it may be produced by other diseases, as we shall see in the enumeration of its remote causes.

But we here mean only to speak of it as originating from the causes above specified, the rest being properly considered only as symptomatic, and must have applications according to

DESCRIPTION. At the commencement the patients generally appear languid and indolent, with an uneasy sensation of tightness and oppressive weight at the pit of the stomach—after this there comes on a slight yellowness at the angles of the eyes, which disperses itself over the white, the skin at the same time putting on a similar appearance—there is very often a pain of the stomach—the body becomes costive—the appetite fails—the excrements appear of a clay or ash colour—and the urine yellow, tinging any white linen immersed in it of the same colour, and depositing a copious yellow coloured sediment—there is generally a weight, fullness, and stretching of the right side under the spurious ribs—there is also a general nausea and loathing of food, sometimes attended with vomiting---the skin often itches---the pulse is sometimes quick---sometimes there is a hiccough---and, should a looseness come on, with yellow coloured fæces, the disease terminates.—These are the common symptoms, and this the common course of the curable jaundice, which will go off in a few days, if it has originated only from a constriction of the duodenum, or the common gall duct—nor will it continue much longer if viscid bile has only been the obstructing cause—but if biliary concretions have been the source, in a few weeks, or months, most probably the same symptoms will make their appearance in the same succession; and, at length, the disease will, from a repetition become perpetual—sometimes better and worse, though less severe than at first.

Under these circumstances, the yellow colour becomes deeper in a great degree, forming what is called the black jaundice—so much does the bile diffuse itself through every part of the habit, *that it has been asserted*, objects appear to such patients of a yellow colour; and even the saliva acquires a bitter taste—however, in these cases, the blood seems to be so surcharged with bile, that its texture is broken down—frequent hæmorrhages appear, particularly of the nose; and the blood transuding also through the sides of the vessels is deposited in the cellular connecting membrane, occasioning a general livid cast—the fluids then running into a thin acrimonious state, occasions great itching---the body becomes dropsical---the belly fills with water; and thus is the miserable scene closed.

CAUSES. The *remote* or *inducing* are, bilious or hysteric colic---strongly operating purges---ossification, or compression of the biliary ducts, from tumours externally or internally situated---pregnancy---violent anger, or long continued grief---obstruction, scirrhus, or abscess of the liver---that black coloured viscid fluid in the intestines of new born or young infants, call-

ed meconium, being not properly purged off---intermittent fevers taken off too soon by the use of the bark—gall-stones or calculi, or viscid bile, obstructing the gall duct.

The *proximate* or *immediate*, an absorption of bile, which has been separated, into the habit—some are of opinion, that bile must be secreted and thrown back into the fluids before a jaundice can take place—whilst others hold, that an increased quantity of bile not secreted into the gall bladder, by its viscidness or acrimony may also be the cause---however, it is not our business here to attempt to settle these doubts---our opinion will be known by the following

CHARACTERISTIC SIGNS. A partial or total obstruction of the ductus communis choledochus, (36.) most commonly from viscid or concreted bile, attended with a yellow colour of the white of the eyes and skin---high coloured urine, tinging linen dipped into it of a yellow colour.

CURE. The indications of cure are, to remove the obstructions; which, as it originates from different causes, will require different modes of treatment.

If it should arise from viscid bile, which we take to be the most common cause, in full habits, bleeding may first be had recourse to, and afterwards dandelion draughts may be given, (No. 149.) every night and morning, for two or three successive days; then the saponaceous pills, (No. 150.) four, two or three times a day, with four spoonfuls of the saline mixture, (No. 151.) or infusion of quassia, (175.) or dandelion tea,---after these have been continued for six or seven days, if no signs of amendment appear, if the yellow colour of the skin and eyes begins not to grow thinner, the urine to be of a lighter tinge, and there should be no yellowness in the stools, an emetic, (No. 11, 12.) then will be proper, which may be often repeated, if necessary; and the day after the calomel bolus and purging draught, (No. 105, 106.)---some indeed advise small doses of calomel, (No. 109.) to be mixed with the saponaceous pills, and purged off occasionally---in addition to what is here advised, fomentations, (No. 85.) may be applied frequently to the right side, or bags of hot salt, oats, or a bladder half filled with boiled bran and water, pretty warm; and, by proceeding in this way, there is little doubt but the viscid bile will be removed, and the cause of the disease conquered.

But should there be any acute pain attendant in the region of the liver, with a quickness of the pulse, and other symptoms indicative of any inflammatory affections, we must proceed as directed in inflammation of that organ, (340.) before we have recourse to any emetic, which may safely be administered after the inflammatory or painful symptoms are subdued.

Towards

Towards the conclusion of the disease, and to prevent a relapse, the aromatic bitter bolus, (No. 64.) or the deobstruent soap pills, (No. 117.) may be continued for some time twice a day, washed down with chamomile tea, or infusion of quassia, (175.)

Bath and Harrowgate waters have been by some considered as specific---they may certainly be very useful in jaundice proceeding from viscid bile, or bilious infarction of the liver, towards the conclusion of the complaint, and calculated perfectly to clear the liver from these causes; but in other cases would, from their heating and stimulating powers, be highly improper.

When it proceeds from gall-stones, or scirrhusity of the liver, we must act as in cases of pain in that organ from these causes. (361.)

When from a redundancy of bile, and bilious colic, what has been recommended in those complaints, (356, &c. will be proper.)

In order, however, to prevent a return, and invigorate that part of the system particularly affected, the diet of our patients should be light and easy of digestion, avoiding all fatty or viscid substances, or things too powerfully astringent: the body should be kept regularly open, by the occasional exhibition of the aperient pills, (No. 108, 109.)---riding exercise should be persevered in, and the place of residence should be such as afforded a pure, light, clear air.

HOFFMAN, in curing this disease arising from obstruction, used to begin with bleeding; afterwards prescribed half an ounce of antimonial wine in one or two ounces of oil of almonds, and ordered the patient to drink freely of the decoction of the roots of strawberries, marsh-mallows, liquorice, or a handful of endive, succory, chickweed, chervil, beet, and four sorrel---to each of which decoctions he added two drams of cream of tartar and fifteen grains of nitre---in the evening an opening glyster was given, and afterwards, a purge of Epsom salt and syrup of roses, of each an ounce, dissolved in two or three ounces of water, or made with senna and tamarinds---if these formed not a cure, to the acidulated chalybeate springs he had recourse.

Thirty grains of the aloetic pill, with myrrh occasionally, is a beneficial medicine.

§ 2. DROPSY—HYDROPS;

from the Greek word, *udor* aqua, water; because this arises from

from a collection of lymph, or serous fluid within the cellular membrane, or different cavities of the body.

When it is general, it is called ANASARCA, from *ana*, per, through, and *sarx*, caro, flesh—when local, it receives its name from the part it affects, or the appearance it occasions.

If in the breast, it is called HYDROTHORAX, from *udor*, and *tho-rax*, pectus, and chest—if in the belly, ASCITES, from *afkos*, uter, a leathern bottle, from its appearance—if in the womb, HYDROMETRON, from *udor*, and *metron*, matrix, the womb—if in the head, HYDROCEPHALUS, from *udor*, and *kephalos*, caput the head—and other species, as DROPSY OF THE LUNGS—OVARIA—FALLOPIAN TUBES—but as they all originate from one and the same proximate cause, when curable, they require similar internal modes for the accomplishment.—We shall therefore describe the symptoms by which they may be discovered, before we proceed to the method to be adopted for their cure, making some observations where the general rules may be deviated from, with respect to the situation of the watery collection—and, FIRST, of

GENERAL DROPSY, or ANARSARCA—this is also called LEUCOPHLEGMATIA, from *leukos*, albus, and *phlegmatia*, pituita, from the colourless swelling of the skin, arising from the collection of a watery or pituitous humour beneath.

DESCRIPTION. In this disease the body has a pale appearance—the whole skin grows soft, with an inelastic swelling—this originates from watery lymph copiously diffused through, and accumulated in the cellular membrane, (25.) encircling the whole body, its muscles and coats—whence arises a soft tumor, pale and squalid, over the whole of the machine, retaining the indentation, or print of the finger, wherever strongly impressed—the feet and legs swell, particularly towards the evening, and the tumefaction gradually ascends upwards through the whole cellular membrane—hence it differs from that kind of pasty swelling which only affects the lower extremities in the evening and subside in the morning; for in the anasarca, in the morning, some parts are more swelled, particularly the eyelids and cheeks, also the scrotum, (53.) and penis, (53.)—a difficulty of breathing comes on, and cough—the patients lose their appetite, but are very desirous of liquids—the urine at first is pale and watery, though in the latter stages high coloured, though almost always small in quantity—the pulse is small, quick, and irregular—there is a slight fever—sleep affords little refreshment—and they seldom or never sweat.

ASCITES is a considerable swelling of the belly, with a perceptible fluctuation within; for if the hand be laid on one side,
and

and the other struck, this fluctuation is readily discovered. In the common species of this complaint, before the belly appears to swell, the patients make water in very small quantity, which is foul, and deposits a yellowish sediment, or one coloured like brick-dust—the legs generally swell, then the belly—after which a difficulty of breathing comes on, especially upon lying down---the patients complain of weight or heaviness---the flesh wastes away---and the bowels are commonly costive---general debility takes place—the pulse becomes weak and frequent—there is a slow fever attends—by continuance the water becomes putrid, and brings on inflammation, ulceration, and mortification of the viscera; for, on opening bodies who die of this complaint, some of them are found diseased, most frequently the liver, next to that the spleen, sweatbread, and mesenteric glands.

Though we should observe, that in some cases of ascites, the fluctuation is not always perceptible, owing either to the great viscosity of the contained fluid, or to its being confined in a number of cysts, or mixed with what are termed hydatids, or small vesicles full of fluid.

Sometimes the ascites is accompanied with an anasarca, (178.)—in which case a cure is scarce to be expected, and, indeed, unless the ascites is recent, and the abdominal viscera in a tolerable sound state, our hopes cannot be more favourable; because, when the viscera are diseased, or strongly obstructed, these form insurmountable obstacles to a pleasing termination.

HYDROTHORAX. Some authors who have been much employed in opening of dead bodies, assert, that this disease is much more common than is imagined—it is attended with a difficulty of breathing, and sometimes of the acute kind—a weight in the chest, pallid countenance, puffy swellings of the hands and feet, a fluctuation upon motion—a sudden sense of suffocation during sleep, and stupor of either arm—the patients are affected with a dry cough—nor can they lie down upon the side affected, nor in a supine posture, if both cavities of the chest are loaded. This complaint is of long continuance, and does not intermit. There is often very great difficulty in discovering this disease—however, if there is a constant difficulty of breathing, with a paleness of the face, puffy swellings of the feet—should the urine be made in small quantity—with difficulty in lying down, a sudden and spontaneous starting out of sleep, with palpitation—and water fluctuating in the chest, the undulation of which can be heard on shaking the patient by the shoulders, or striking upon the ribs—there can then little doubt remain of the nature of the affection.

Sometimes there will arise a dropsy of the membrane surrounding

rounding the heart, called a DROPSY OF THE PERICARDIUM, (30.) in which urine is made in small quantity, and of a very red colour—there is a difficulty of breathing, but not so severe as in the former case--and the patients lie down with more ease on the right than left side--they generally complain of thirst, and have a dry cough--and feel a sense of weight, oppression, straitness, and pain about the region of the heart after fatigue or conversation; they frequently faint, and are affected with palpitations, the pulse is weak, easily quickens, and sometimes intermits---they often perceive an undulating motion about the third, fourth, or fifth rib---have puffy swellings of the hands and feet, and die suddenly.

The HYDROMETRON---the water is either contained in the uterus, Fallopian tubes, or ovaria, (50, 51, 52.) there are no modes of properly distinguishing the two latter; but a conjecture may be formed, if any tumor appears in the place where they are situated, and this should be accompanied with other dropical appearances. With respect to a dropsy of the womb, it discovers itself by a suppression of the menses---a swelling of the belly---flabbiness of the breasts, attended with unwillingness or inability to move, pain, shiverings, and febrile affections.

CAUSES. The *remote* or *inducing* are, suppression of any accustomed evacuations, as menses, lochia, or piles--too free an use of fermented liquids, spirits, wine, or malt liquor--crude and viscid food, cold water drank too copiously whilst the body is more than naturally heated—the exhibition of very powerful purgatives, immoderate bleedings, and salivations;—and, indeed, they are often the consequences of other diseases, as hæmorrhages—repelled gout, dysenteries, consumptions, jaundice, continued, remittent, or intermittent fevers—pregnancy, scirrhus tumors of the abdominal viscera, but particularly of the liver, or polypous, or stoney concretions about the heart—or, in fine, whatever will occasion too free a secretion of the serous fluids into the cellular membrane, or any cavity of the human machine, and prevent the proper action of the absorbent system, either solely, or in a degree inadequate to take up the fluids separated into the cavities by the exhalent arteries---which last may be considered as the *proximate* or *immediate* cause of all dropsies.

CURE. The indications are, to evacuate the water from the different places where it may be affected; and afterwards invigorate the system, so that the absorbent vessels shall be enabled to perform their functions properly. With regard to the first point, if the patients are not too far exhausted, and have strength to bear the operation, and the case is recent, brisk purging is necessary;

cessary, with some of those medicines which are known to evacuate in the greatest proportion the serous fluids, particularly jalap, joined with nitre, (No. 151.) gamboge, with cream of tartar, (No. 152.) in robust habits—in constitutions more delicate, the saline mixture, (No. 1.) with two or three drams of tincture of jalap, is sufficient to answer the purpose.

Or, ten grains of calomel may be given, at proper intervals, to prevent a salivation, assisted with six or seven ounces of a strong decoction of garlic—and this last given three or four times a day.

On the intermediate days of exhibiting purgatives, diuretics and slight tonics may be administered—a spoonful of mustard-seed, with a decoction of broom, (176) powder of squills, (176) wild vine in powder or decoction, (176.) quassia wood, (175.) with gentle preparations of iron, (139.) or half an ounce of kali infused in a quart of Rhenish wine, two or three glasses of which may be taken in the day, and in the evening a slight opiate, (No. 5.) the diuretic salt, (176.) may be given in any convenient vehicle—or the powder or infusion of fox-glove, (176.) joined with some of the absorbent powders, twice a day, increasing the dose as much as the stomach will bear with ease; for this medicine, though in high estimation as a diuretic, is apt to create, if too rashly administered, an extreme and uncommon sickness—the oxymel of meadow saffron, (176.) one or two drams three or four times a day, or half an ounce once or twice a day.

Cream of tartar, from half an ounce to six drams, dissolved in ten ounces or a pint of water, taken early in the morning, has been successful in various cases both of the anasarca and ascites.

But, should neither cathartics nor diuretics prove successful, the sweating chair has been recommended, as by this means great part of the stagnant lymph may be evacuated through the pores of the skin.

Indeed, some advise for this purpose from one to two scruples of the compound powder of ipecacuanha, formerly called DOVER'S powder, to be taken at bed-time, and laying the patient in flannel, and this repeated every other night—the sweating, if procured, should be kept up for some time, and the patient supported with gentle cordials, (No. 28, 29.) or camphorated mixture, (150.) when the sweating abates, the patient should gradually cool, and the surface of the body be rubbed with hot flannel.

In many cases recourse may be had to scarifications with the lancet, or those used in cupping in the lower part of the legs; but care should be taken not to make the wounds either too long

long or too deep, for fear of bringing on a mortification ; which must be prevented by spirituous fomentations and proper digestives—from this operation considerable quantities of water have been evacuated.

If there are no visceral obstructions, small doses of bark may be continued through the whole course of the disease with considerable advantage, as they will contribute to strengthen the system, consequently promote the action of the lymphatics.

The juice of leeks, a table spoonful taken twice a day, has been known to perform a cure—and when there is any feverish disposition, the neutral salts of the diuretic class are preferable to the kali prepared—the diuretic electuary and draught, (No. 153, 154.) and the deobstruent pills, (No. 155.) have been, in dropical cases, in high estimation—the pills in cold phlegmatic habits have been said to be efficacious ; but where there has been a tendency to inflammation, suppuration, or mortification, they are prohibited.

Different have been the opinions relative to the abstinence from, or free indulgence in, the use of liquids—instances of cures have been produced where both one and the other have been efficacious---one would naturally conclude that the former was the most rational plan, calculated to prevent too great an accumulation of aqueous fluid--but, in desperate cases, I should not refuse the indulgence, particularly where there was an extreme longing ; for the mind being gratified, often produces astonishing good effects on the constitution ; for which we are not always able to account. I knew a woman cured by drinking a large quantity of forge-water one evening, where every other remedy had been tried for a long time in vain ; and many other instances are to be found in the works of medical writers. In cases of abstinence, the thirst sometimes will be so distressing, as almost to conquer the most determined resolution---in order, therefore, to alleviate this unpleasant symptom, the mouth may be kept moist, and intenseness of thirst assuaged by a mixture of lemon juice and oil-- hard biscuit soaked in Rhenish wine---nitre lozenges, tamarinds, or holding a leaden bullet in the mouth, which solicits flow of saliva, and keeps off thirst.

The remedies advised for the anasarca may also be had recourse to in the ascites---in addition to which, the abdomen should be rubbed freely, and for some time together, two or three times a day, with the camphorated liniment, (No. 132.) increasing the quantity of camphor, if necessary---for this has very often proved an useful auxiliary. Indeed, some practitioners have attributed the cure to frictions with oil alone.

However, when all our methods fail for evacuating the water, we must have recourse to tapping--which operation is often deferred too long, till the absorbent vessels, by soaking in the watery fluid become so relaxed, that they never can recover their tone and action--and the viscera, from the same cause, will be so spoiled, that the relief procured can never be permanent--hence, where the disease continues obstinate, notwithstanding the use of internal and other remedies, a fluctuation of water is perceptible, and the abdomen sufficiently distended to prevent the danger of wounding the viscera by the trochar used in the operation, we should not hesitate in performing it, taking care to increase the pressure on the abdomen, either by the hands, or a broad belt, during the evacuation of the watery fluid, in proportion as the abdominal cavity is emptied; otherwise the blood will rush in such superabundance into the weakened vessels, that the heart, for want of a sufficient quantity being carried to it to stimulate its ventricles, would lose its action, and a fatal swooning be the consequence---for the prevention of which, the operation should be performed as advised by HEISTER, SHARP, or MONRO, in the Medical Transactions of Edinburgh.

On the undulating motion being very strong, the watery fluid pure, and capable of being evacuated completely, are founded our hopes of success; for where the fluctuation is not very perceptible, we shall have reason to suspect the fluid is viscid, contained in cysts, or full of hydatids, or that it is purulent or bloody, which are cases more deplorable.

Sometimes though, after the water is evacuated, it will again accumulate---tapping may be again repeated; for numbers have undergone the operation a variety of times, and had by these means their lives prolonged; though their health has been never thoroughly re-established.

In the DROPSY OF THE CHEST, the same internal remedies may be made use of as in anasarca; and, should these be inefficacious, we should try what success might be attained by making a similar aperture within the thorax, as advised in the ascites, under the hands of some skilful surgeon--and when we are so fortunate to procure an evacuation in any of these cases of the watery contents, we must endeavour to prevent its accumulation by such things as will invigorate the system, increase the digestive powers, and add strength and force to the vessels, such as bark united with chalybeates and aromatics, (No. 39 to 41, 61 to 65.)—daily friction with a flesh brush—and moderate exercise—and in an anasarca, if we can be assured that no mischief lurks in the viscera, cold bathing may be conducive to answer those

those purposes—rhubarb also infused in wine may be occasionally given.

With regard to diet, plain meats are allowable, preferring those which are roasted to boiled—all crude, watery, flatulent vegetables should be avoided, and those of the stimulant diuretic class (175.) only be permitted—Rhenish wine, with Seltzer water, is the best beverage—or geneva mixed with some chalybeate, or common water, if the other cannot be obtained.

As the DROPSY OF THE HEAD has often been mistaken for other diseases, particularly worms, or cutting of the teeth, on this subject we think it necessary to be particular. This complaint is divided into two species, EXTERNAL and INTERNAL—the former is of little moment, if not united with the latter; for in that water is perceptibly collected under the integument of the scalp and is cured by discutient fomentations, (No. 25.)—blisters, scarifications, and setons—having at the same time recourse to cathartics and diuretics.

But the INTERNAL DROPSY OF THE HEAD is not so readily distinguishable, as it comes on with symptoms so similar to those attendant on worms, cutting the teeth, and other irritating causes---and, when water is accumulated, very rarely; indeed with me, it is a doubt, whether it ever has been cured.

DESCRIPTION. The symptoms of this complaint vary in different subjects---sometimes they come on rapidly---sometimes considerably more slowly---owing, perhaps, to the parts of the brain affected, or to the different degrees of distensibility of the cranium; for if the water accumulates between the dura and pia mater, (26, 27.) the pia mater and brain, (27.) and the skull should be soft, and capable of being much distended, the progress of the disease will be more gradual, than if the accumulation happens in the ventricles, which is for the most part, the case, and the skull should be firm, and not capable of giving way at all—in general, however, it pursues the following course:—at first, there is a pain at the nape of the neck, or shoulders, or sometimes the lower limbs—the arms, though not often, are similarly affected—or, should these parts feel no uneasiness, the head and stomach become the seat—sickness comes on, and a variety of other symptoms, similar to those which happen in worm cases---yet, in a few days, others of a more alarming and dangerous nature shew themselves, such as violent, deep-seated pain in the head, extending from temple to temple, and across the forehead---sickness is now and then very considerable---sometimes the patient dozes, frequently sighs, and breathes irregularly---the pulse also becomes irregular and slow---at the beginning

beginning, and a little before death, there are some febrile affection, especially towards evening---at length, every symptom which is a concomitant with irritation of the brain attends by turns---the pulse quickens---the breathing becomes very laborious and difficult---the heat excessive---the patient is averse to light---takes things greedily---and cannot bear to lie in any posture except horizontal---the excrements pass away involuntarily---the hands are commonly elevated about the head---the eyelids become paralytic---and the iris, or center of the eye, dilated, and immoveable---the patients are apt to squint, and scream out often upon raising the head, and the cheeks now and then flush, the pulse soon flutters, the strength fails very quickly, if convulsions do not suddenly put an end to the disease, and fatally close the scene.

CAUSES and MODES OF CURE. Besides those causes which have been enumerated in dropsy, many of which may give rise to this, there has been reason to suppose others may also be greatly instrumental in producing this, such as falls, blows, or severe bruises upon the head, excessive exercise in hot weather, with exposure to the powerful heat of the sun, violent vomiting, the whooping-cough, standing long and repeatedly upon the head, or hanging by the middle over rails with the head downwards, common tricks by which children divert themselves---or, indeed, any other cause which, in full habits and active constitutions, dispose the blood too much to the head---and these particularly where no dropsical tendency has previously made its appearance; for I am fully persuaded, that in very many of these cases, if not in all, congestion and slight inflammation are the precursors to the aqueous accumulation. In this conclusion I am not only authorized by the opinions of some late judicious writers on the subject, but by experience, particularly in three cases, two of which were cured, and one proved fatal. In the first, I was present, when a lively, active boy, about five years old, came in from play to his mother, complained much of his head, and that, though he was not sleepy, he could not keep his eyes open: on laying him down, he begged to be turned from the light, he could not bear it; and soon after he began to be sick, and vomited constantly, when any thing was given to him---on examining him, he appeared heated, and his pulse quick, and frequent; but not much more so that what one might naturally expect, from the exercise from which he had just retired, the pupils of his eyes were contracted, and when a candle was held to him, it was with difficulty that he could for a moment keep his eye-lids open---that there was a load and oppression on the brain, I could not doubt---

doubt---a glyster was given him immediately, his legs were put into warm water, and eight leeches applied to his temples; for his mother would by no means permit the use of the lancet, nor cupping, and that night, four grains of calomel, with the same quantity of jalap and cream of tartar, were given him; before ten in the morning he had five or six stools, his vomiting ceased soon after the application of the leeches, he could bear the light better, nor was the pupils of the eyes in any thing like so contracted a state, still his head was not perfectly easy, nor was he free from that drowsy appearance, he was bled a second time, and his purge repeated at night, which produced every wished-for effect, after which he lived for some time very abstemiously, and now and then had recourse to purgatives, and by these means he was perfectly reinstated in his health.

The SECOND was nearly similar, though the symptoms, not any of them, appeared with so great a degree of violence, the attack was equally sudden, and the complaint yielded to the same mode of treatment. In this case I was sent for when the child had been ill only a few hours; and I pursued the idea merely of unloading the head. I had no suspicion of water in any part of the brain.

IN THE THIRD CASE, the child had been ill for some days, and, from the account given me by the mother, a very sensible and intelligent woman, confirmed by the surgeon, added to the symptoms at that time apparent, I did not hesitate to conclude, that there was an accumulation of water in the brain; for the patient laboured under a coma, the pupils of the eyes were dilated, a general stupor was prevalent, with obstinate costiveness, the pulse was irregular, the face sometimes flushed, sometimes was pale, the stools when procured by glysters and doses of calomel, were fetid, and full of jelly-like gluey mucus, and very little urine passed, and that often involuntary, from the application of a blister to the head, and rubbing in from half a dram to a dram of mercurial ointment, with two or three grains of calomel given every night, all the symptoms appeared to be much alleviated---indeed, so much, that the parents flattered themselves with the hopes of a recovery---but they were unfortunately deceived; for, on the evening of the day when these favourable appearances presented themselves, convulsions suddenly came on, and the patient in a few hours expired. On opening the head, the brain appeared to be full and tight, the vessels of the dura mater distended with blood; and, in cutting away the superior part of the brain down to the ventricles, innumerable red spots appeared through the substance, which were small branches of arteries distended with blood---and in
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the ventricles was a great quantity of water, supposed not to be less than eight ounces---the inner surfaces of those cavities shewed evident signs of inflammation, particularly on the bed of the optic nerves, called by anatomists, *thalamus nervorum optico- rum*.

From the similarity of these cases, and result of the last, I conclude, that if the two former had been neglected, the consequences would have been the same.

In the beginning, therefore, of complaints of this kind, bleeding and purgatives should be depended upon; and I am persuaded, if advised in proper time, many unfortunate objects may be snatched from the jaws of death. In the latter stages, I fear we can never promise success, raising a salivation by the use of mercury, or throwing it into the habit in a sufficient quantity, to solicit the re-absorption of the serous fluids from the ventricles of the brain, or places where it may be accumulated, blistering the head, vapour baths, and the use of the fox-glove, (176.) as one of our most certain diuretics, given in small doses, bid the fairest for relief; if any under these deplorable circumstances are to be had, though I am greatly doubtful with respect to a radical cure---however, as the most rational means, they ought to be pursued.

§ 3. TYMPANY—TYMPANITES.

called so from *tympanum*, a drum, either from similarity of sound or distension---this is a light and elastic swelling of the belly, making a sounding noise on being struck, which is the characteristic symptom of this disease---to which may be added, cructations, rolling of wind in the bowels, costiveness, and pain, relief being afforded by the emission of wind upwards or downwards, and a wasting of the other parts.

It is divided into two species, one named *INTESTINAL*, when it arises from flatulencies in the intestinal canal---the other *ABDOMINAL*, when it arises from air pent up in the cavity of the abdomen, between the intestines and the membrane lining the muscles of the belly, called *peritoneum*, (34.)

THE FIRST we must attempt to cure by the administration of such stimulants as expel wind, and are antispasmodic, such as caraway seeds, anniseeds, &c. (145.) *asafoetida*. spirit of vitriolic æther, (149, 150, 151.) with opiates, (152.) keeping the body open every now and then, with gentle warming aloe-tic medicines, (No. 108.) and using frictions to the abdomen once or twice a day---by these means we may discharge the flatulencies---and we should also attempt to strengthen the coats
of

of the intestines, that a relapse may be prevented, by aromatic corroborants and stomachics, such as zedbary, (146.) quassia wood, (275.) orange-peel, and some of the warmer bitters—swathing the body with a broad belt, and using riding exercise—glysters also may be occasionally given of infusions of chamomile, wormwood, or gentian, in which may be dissolved from half a dram to a dram of asafœtida.

THE SECOND requires tapping, if curable at all—but as this often arises from the corruption of water or other fluids confined in the cavity, or from ulcerations or mortifications of the different viscera, little can be expected from this operation.

§ 4. ATROPHY;

from the Greek *a*, *alpha*, non, not, and *trepho*, alô, to nourish.

This complaint is very often symptomatic, depending upon some other disease in the habit, which disease, if it comes within the reach of the medical art, by curing, the atrophy, an effect produced from that cause, will also be conquered;—but our hopes can be but small when the wasting of the flesh is unaccompanied with any hectic fever, and comes on without our being able to discover any manifest cause—which is the case in the true ATROPHY, or NERVOUS CONSUMPTION; for this is a perceptible wasting away of the whole body, without any remarkable degree of fever, cough, or difficulty of breathing, attended with loss of appetite, and too weak digestive powers—hence arise languor and daily increase of emaciation.

DESCRIPTION. In the beginning the habit has a puffy or pasty appearance, the countenance is pale and squalid, the appetite loaths every kind of food; and is gratified only by liquids, the patients are constantly languid, and keep very much in bed---the urine is often small in quantity, and high-coloured; sometimes pale, and copious---there is neither fever nor difficulty of breathing, but what arises from great weakness—hence the blood, from want of its wholesome supplies, becomes acrimonious in length of time—from whence comes on heat—a hectic fever, which increases—and is at last attended with cough and a difficulty of breathing.

CAUSES. The *remote* or *inducing* are, debility in the digestive organs—a poor and unwholesome diet—a delicacy, and incitability of the nervous system—a defect or excoriation of the mucus which should defend the inner surfaces of the heart and arteries, excess of passion, or severe mental affections---very free drinking of spirituous liquors—unhealthy air—too con-

slant, and too luxurious pursuits—too copious evacuations—old age, &c.—and, in fine, whatever will produce a *want of sufficient quantity of properly elaborated juices—or a deficiency in the power of applying them*, which are the *proximate and immediate causes*.

In children, this disease very frequently happens, which is owing to another cause, as well as some of those above specified, which is too soon taking them from the breast, and feeding them on solid food—in this case the legs hang closely down—they refuse to stand upon their feet—their skin grows shrivelled—the whole body, particularly the nose and nates, become flaccid—and, in many instances, their appetite is insatiable.

CHARACTERISTIC SIGNS. A wasting away and loss of strength, without any hectic fever.

CURE. The indications are, to restore the tone of the solids, improve the state of the digestive organs, and increase the appetite, by the use of stomachics, as quassia wood, chamomile, orange and lemon, with chalybeates, (No. 60. without the vinegar and muriatic acid, No. 61 to 65. 71. 137.)—every third or fourth morning the patient should be purged with rhubarb, (173.)—medicated wine, or beer, should be taken twice a day, (No. 156,) and the stimulating tonic electuary, (No. 157.) may be administered, balsam of copaiva, (165.) Canada balsam, (175) the liquor of hartshorn, or ammonia prepared, mixed with a little sugar—malt liquor, especially London porter, may be drank, as it has proved useful and nutritious to those who have not been accustomed to it—the lightest kind of nourishment should be had recourse to, with ass' milk, beef tea, &c. (133, 134.)

As this disease happens to almost all old men, it is commonly attributed to a want of fluids; and, though it may not be attended with, it follows a fever—here choice, nutritious food, full of juices, is requisite, (113.) also the use of generous wine, and constant warmth in winter, and sleeping with young healthful subjects has been considered as particularly beneficial.

§ 5. SCURVY—SCORBUTUS.

There are vast variety of eruptive complaints which go under this denomination; for when spots of different kinds, of whatever nature they may be, and however various their appearance, shew themselves upon the skin, for numbers of which we have no specific term, they are all called scorbutic.

However, we mean to confine ourselves to the PUTRID, or SEA SCURVY—which disease is considered to arise from a specific or peculiar humour, generated in the constitution, and, though

though sometimes epidemic, is neither contagious nor infectious.

DESCRIPTION. This may properly be divided into three stages, marked out by the different degrees of violence of the symptoms.

IN THE FIRST, the patients complain of weakness, and are much fatigued on using any exercise—they have a difficulty in breathing, are very often sick, and have a disinclination for, or dislike to animal food—the gums are hot, painful, itch, and on them, as well as the tongue, there appear ulcerations—the teeth become loose, decay, from the gums being in a great measure destroyed, and leaving the parts, which in the natural state they cover, too much exposed to the air—the breath becomes extremely offensive—the urine is high coloured, smells strong and disagreeable, and has floating on its surface an oily film, or skin-like appearance—the pulse, for the most part, is weak, seldom hard, and always grows quicker upon motion—different coloured spots appear on various parts of the body, except the face, reddish, sometimes of a blueish cast, livid, or black—the gums become soft and spongy; and from them, as well as from other parts of the body, there are effusions of blood.

IN THE SECOND, pains attack the legs, which also swell, as do the knees, which impede the motion of these parts—besides, pains also affect the belly, breast, vertebræ, and all the muscles of the machine—the face begins to look ghastly—and so great is the languor, when the patients have restrained a long time from motion, that, on being slightly moved, they are apt to faint; and sometimes, if exposed to the open air, they die; now they have often febrile affections of the erratic, continued, or intermittent kind—palpitations of the heart, and difficulty of swallowing—their understanding and appetite, notwithstanding their great debility, keep up in a tolerable degree—and they have no pain, except on motion.

IN THE THIRD STAGE, the tendons and joints grow stiff, they have frequent fainting fits, great dejection of spirits—and are extremely fearful, from no apparent cause—the cicatrices of old ulcers, if there should be any, again break open—and on the legs, soft, livid, and painful swelling takes place, and spongy ulcers, which bleed—obstructions, scirrhusities, ulcers, and mortification affect the viscera—the urine is small in quantity, fetid, high-coloured—difficulty of breathing, suddenly destructive, sometimes closes the scene, or they expire in some fainting fit.

CAUSES. The *remote* or *inducing* are, living in a moist, cold atmosphere, particularly if in marshy situations—suppressed or immoderate evacuations—mental affections of the gloomy kind, sorrow and fear, preceding diseases—an indolent life, with luxu-

rious indulgences of the appetite—gross viscid food without any, or with too great a scarcity of, fresh vegetables—living upon the coarse salted, smoked, or dried flesh of quadrupeds or fish—few of these causes singly are sufficient to bring on this disease; there must be a combination—sailors, from other sources besides these, are subject to the scurvy, because they feed on musty bread, water, fish, and flesh, which are corrupted.

Now these causes, either by suppressing the matter of perspiration, which ought to pass out of the habit, or from their own corrupt nature, induce an alcallescent acrimony in the blood, which particular acrimony is the *immediate cause* of the scurvy.

But we must here observe, that it not only affects people who live in cold, damp situations—have little or no vegetable food, wine, or other cordial drink, and are not sufficiently clothed—but it sometimes rises in dry soils and pleasant situations, and attacks people who live in affluence—and hence becomes epidemic, as was the case in the spring of the year 1760, in Hampshire; for there it extended its influence in a most amazing manner amongst all classes of people.

From the consideration of these causes, it appears probable, and is generally allowed, that the scurvy arises in the body spontaneously, in consequence of some unknown changes in the atmosphere, which are more capable of generating scorbutic acrimony, in proportion as there is a defect of sound vegetable diet, fermented liquors, and clean or sufficient cloathing.

But though the combination seems necessary to produce this disease in the soundest and strongest constitutions, still, in such habits as are weak, and naturally relaxed, dull, and slothful, or which have been debilitated by any preceding malady, notwithstanding they live possessed of generous and proper diet, with warm cloathing, experience convinces us, that from changes of the atmosphere alone, in them this complaint will make its appearance.

CHARACTERISTIC SIGNS. Loss of strength, bleeding of the gums, and different coloured spots in the skin, for the most part livid, particularly at the roots of the hair—occurring in cold climates, most frequently, after feeding on putrid or salted animal food, that of the vegetable class being at the same time defective, particularly fresh vegetables.

CURE. Dreadful as are the symptoms of this complaint, if the texture of the whole system of the solids is not destroyed, they all give way to proper treatment. The indications of cure are, to attempt to promote the free excretion of the putrid humours by the intestines, kidneys, and skin, lest, by a stagnation

tion of this scorbutic virus, the corruption may become greater and more acrid.

For which purpose, living upon fresh vegetables, be they of what nature they will, is recommended, particularly those of the cooling acescent or acid kind, such as letence, cabbage, endive, lemons, citrons, oranges, gooseberries, sorrel—using cyder, perry, and white wine for drink—milk diet, the creams of rice, oats, barley, sago, wheat-bread well baked, and the flesh of young animals, or broths made from them—onions, garlic, leeks, water cresses, horse-radish, mustard, &c.

With regard to medicines, gentle aperients are only allowable—strong cathartics are hurtful, as are also all opiates; for they destroy the strength, and dissolve the blood—all metalline preparations should be prohibited, particularly those of quicksilver, iron, and antimony.

The most eligible aperients are tamarinds, prunes, cream of tartar, or such as come nearest to the vegetable class—in order *to assist perspiration*, tar-water, spruce, decoction of the branches of the common red fir or pitch tree—to *promote urine*, oxymel of squills, taken in small doses, but often repeated in the day, so that within that space of time one ounce may be consumed; for by this the body is kept open, the pains are mitigated, and all the excretions promoted.

Every other day, in the beginning, a sweat should be raised, by taking two or three times in twelve hours twelve grains of the squill pill of the London or Edinburgh Dispensatories, or the camphorated bolus, (No. 158.)—these should be continued for some time, though the disease should be much alleviated, to prevent a relapse.

Goat's whey would be very beneficial, with small doses of Polychrest salt, mixed with two or three ounces of the scorbutic juices, taken two or three times a day; for these prove mildly aperient and diuretic.

If there should be no fear of hæmorrhages, warm baths, made with aromatic plants are serviceable in promoting perspiration, and diluting the humours.

Bleeding in general is extremely prejudicial in the second and third stage of the scurvy—nor should it be used even in the first.

The mouth may be washed with any of the gargles, (No. 44. 46. 93, 94.)—or decoction of bark, with tincture of myrrh, may be used—to the ulcers, strong decoctions of bark, absorbed by lint, or soft rags, is the most useful application—and, should the limbs be swelled, or the joints stiffened, they may be bath-
ed

ed with warm vinegar, or partial vapour baths may be applied.

With respect to the use of vegetables, we must observe, that if patients have been deprived of them for a long time, they must not be suffered to eat of them at first voraciously, as they are apt to do if left to themselves, lest they should fall into a dysentery—they should begin moderately, and increase the quantity by degrees.

On regularly observing what has here been laid down, particularly the feeding on fresh vegetables, we shall have no reason to be doubtful of a cure, which usually first shews itself by a gentle looseness—and if in a few days the skin becomes soft and moist, it indicates infallibly a quick recovery, especially if the strength returns, and the patient can bear being moved and carried into the fresh air without fainting—but should the body remain in a costive state, notwithstanding the free use of vegetables, and the skin harsh and dry, we must have recourse to the gentle aperient medicines we have before specified, and warm bathing; for nothing contributes more to the recovery of scorbutic patients than gentle sweating.

Different other remedies are recommended, such as the decoction of water dock root, with crystals of tartar, (No. 159.)—communicating fixable air to the stomach, by means of neutralizing prepared kali in that organ, (No. 160.) WORT, (No. 161.) where fresh vegetables cannot be supplied, has been considered as more efficacious than the inspissated juice of oranges and lemons, mineral acids, or sour crout, or what is generally taken and applied at sea for the cure of the scurvy, of which from two or three or four pints in a day are to be administered, if the patient can bear it, and the looseness, which it generally occasions, be not too violent.

However, though the general plan here laid down will seldom fail where there is a probability of success, still, in cases of emergency, where fresh vegetables are not to be had, it may be of some essential service to be informed of those things which may in some degree supply their defects.

§ 6. SCROPHULA;

derived from scrofa, a swine, because these animals are subject to it: when it fixes on different parts, it receives different names—if the glands of the jaw, or below the ears it is called STRUMA—if under the tongue, RANULA—if in the lachrymal glands, LIPPITUDO—if in the thyroid gland, BR. CHOCLE, or Derbyshire throat—if the glands of the arm-pits, breasts, groins, lungs,

lungs, mesentery, or other parts, then it is called, though said to be improper, a scirrhus of those parts. Notwithstanding the chief seat of this disease is in the glands, (24.) it does not only occupy them, for it seizes the adipose membrane, muscles, tendons, joints of the body, and the bones themselves.

Scrophulous patients, it is observed, usually possess a more lively disposition, and a maturity of understanding superior to others in the more early periods of life; and that this fixed disease will continue, without almost any change, until the age of puberty, at which time it recedes, and the patients become more robust, and freer from other disorders.

Authors are not agreed whether it is contagious or not—some say, that it may be transmitted from one to another, and that it is capable of being communicated by a nurse—however, so long as a doubt remains on this head, prudence should persuade us to advise scrophulous patients to lie alone.

DESCRIPTION. Tumors, generally about the bigness of a pea, bean, or chestnut, hard, indolent, moveable, of the same colour with the skin, unless they should be in a state of inflammation, for the most part, seize the fauces and neck—often preceded by irregular pains of the belly; but they are also fixed in the arm-pits and groins—though they increase gradually, and adhere to the neighbouring parts—after they have remained for some time in this state, they at length begin to be painful, attended with heat and redness of the skin---the pain is of the lancinating kind, coming on now and then, from the scrophulous humour becoming acrimonious---now a lurking fever begins to make its appearance---and in the part affected there is a hard lumpy feel before an imperfect suppuration takes place, which in some weeks, or months, breaks, and from thence issues forth a thinnish white and curdly matter, which distinguish them from other species of tumor, leaving a foul ulcer, with the lips swelled and hard, these are healed with difficulty, and then very slowly, leaving a disagreeable cicatrix ---sometimes the ulcers are of so virulent a nature, that they occasion a foulness of some of the contagious bones---when these scrophulous tumours affect the lungs and other viscera, a consumption is the consequence---and, indeed, perhaps, greatest part of the consumptive cases may to this owe their origin---and such children are very obnoxious to many incurable diseases, dropsy of the belly, diarrhoea, hectic fever, emaciation, dissolving sweats, &c.

The scrophulous humours of long continuance sometimes fixes in the joints, and there creates tumors---whence stiff joints, swelling of the bones, and infinite other incurable maladies---

so that strumous swellings of the neck may be considered as the smallest part of the disease.

The joints most commonly affected are those of the fingers, wrists, knee, elbow, and ankle; sometimes that of the thigh---a strain in any of which will often be the cause of the scrophulous taint settling there, and shewing itself more suddenly, than if no such accident had happened; for then the swelling comes on more gradually, and without pain or discolouration.

But sometimes this humour does not shew itself externally, but fixes itself in the internal parts of the habit---in these cases if there should be *thickness of the upper lip*, which is generally held as a symptom peculiar to constitutions, where the scrophulous taint is prevalent, and without any other concomitant symptom, there will be sufficient room to suspect a scrophulous acrimony---in these cases, the glands of the mesentery are generally found stuffed and enlarged with a cheesy, purulent, earthy matter---hence come on emaciation, hectic fever, and death.

Sometimes the same matter will fix itself on the lymphatic glands of the lungs, and produce cough--difficulty of breathing---and consumption:---and, when scrophulous tumours are unequal, they are apt to become cancerous.

CAUSES. Those which are *remote* or *inducing*, are said to be, living upon coarse, viscid, or acid diet--or too great quantity of sweets---want of proper exercise---external injuries---preceding diseases---venereal virus---a moist atmosphere---exposure to too severe cold---nurse's milk being too acedent or viscid---or being herself in a diseased state---drinking snow water---dislocation of any joint---or having the scrophulous taint inherent in the constitution.

The *proximate* or *immediate*, a viscid depravity of the serous or lymphatic humours, obstructing and stuffing up those glands of the machine called *conglobate* or *conglomerate*---the FIRST of which is a little smooth body, wrapped up in a fine skin, by which it is separated from all other parts, only admitting an artery and a vein to pass in, and giving way to a vein and excretory duct to pass out---the LAST consists of a number wrapped up in one common membrane.

CHARACTERISTIC SIGNS. In general there are tumors of the conglobate, and often of the conglomerate, glands, particularly of the neck, the upper lip and sides of the nose being full and swelled, the face florid, the skin smooth, and the belly swelled.--When it does not make its appearance externally, see the symptoms. (472.)

CURE. This disease is extremely difficult to conquer, owing to the scrophulous humour being of such a nature, as to be capa-

capable of lurking long in the habit, without manifesting itself, hence, before people are aware of its existence, it gets a firm footing in the constitution, which renders it so hurtful and unconquerable in its effects.

However, the indications of cure are, to clear the lymphatic system, subdue the acrimony of the morbid fluid, and strengthen the habit in general—for which purposes many medicines have been recommended.

Some advise the application of the *hemlock plaister*, with *amoniacum*, (No. 162.) with *lime water* and *burnt sponge*, or *vegetable alkali*, internally—purging the patient now and then with *black hellebore* and *calomel*.

Others, *millipedes*, or *wood lice*, *ass' milk*, *decoction of sarsaparilla*, with *burnt sponge*, or *kali prepared*.

The long continued use of the *decoction*, or *juice of colts-foot*, has been considered by some a certain remedy—*milk whey*, with *the dead nettle*, has acquired much praise.

But the chief remedies in which practitioners place any confidence are, *hemlock-bark*, *fixed fossile alkali*, *sea-air*, and *sea-bathing*—and, perhaps, in the proper applications of these we shall find the greatest probability of success, applied according to the different circumstances of the disease.

Before there are any symptoms of suppuration, or hectic fever, with wasting away of the flesh, the sea-water answers the best; of which from half a pint to a pint is to be drank every morning for some months; and the patient should also bath in the sea—the water gently purges, promotes secretion, warms and strengthens the habit—and, externally applied, discusses the tumors, and prevents the increase of the acrimony of the fluids—but in the inflammatory state of the tumors it is better omitted, until the inflammation abates, or the matter is discharged.

At first sea-water generally occasions thirst; but that soon wears off, or sleeping after it abates this uneasy sensation. It has also been of service where a caries has affected the bones.

Some give it only in such quantity as to keep the bowels moderately open; and, when it creates thirst, mix it with common water.

When there are running ulcers, and a degree of hectic fever, the bark is then preferable; and the best mode of administering it is in tincture made with lime-water, (No. 163.) with which may be administered the powder or extract of hemlock, (152.)

When the disease becomes to be inveterate, and approaches to the scirrhus or cancerous state, hemlock must be given freely,

gradually increasing the dose to the utmost quantity the patient can bear; to which small portions of calomel, or corrosive sublimate, may be added, a quarter or half a grain of the former, or one-twentieth, or somewhat more, of the latter, to each dose; for these not only promote suppuration, but meliorate the discharge from the ulcers:—but this mode of termination should be avoided if possible, as the ulcers which succeed are slow in healing—when they, however, form abscesses, it is necessary to observe, that they should never be opened till all the lumpy induration is dissolved; perhaps in this state it is even better to leave them to themselves; for it is remarked, that they often answer better when they break spontaneously, than when opened by art; and the sinuses that are formed afterwards are seldom cured by dilating—hence it is unnecessary, as well as inhuman, to torture the patients by repeated incisions: for these sores never heal up until the acrimony shall be either subdued, or the constitution acquires sufficient firmness.

The common *sea wrack* rubbed on, or applied in form of cataplasm, sometimes softens, and disperses them—or *fresh ox-gall*, mixed with *soap liniment*, is considered to form an efficacious resolvent mixture.

However, in the indolent state of these tumors, all irritating or stimulant applications, though of the weaker class, are scarce ever to be used, because they are apt to bring on suppuration.

Fixed fossile alkali, called soda, (191.) with strong decoction of *colts-foot*, I have known serviceable, continued for some months—and it is adviseable to give mercury united with hemlock, (473.) and bark decoction, (193.) and administer these alternately, changing them every three or four weeks, when we find the symptoms cease to abate by the application of any of them—that medicine called the *terra ponderosa muriata*, muriated barytes, given in small doses, of three or four drops, gradually increased, is a medicine preferable to the soda—though alone I have never experienced the very great efficacy which I have been told it possesses—though in some of the ferous eruptive cases I have perceived very evident advantages from its use—it seems chiefly to act as a diuretic and gentle aperient.

Large setons, or issues, may be set, as perpetual drains to the habit; they are serviceable.

In scrophulous cases of long standing, sulphureous waters, as those of Harrowgate, Moffat, and Llandridod, have been said to be highly beneficial; but, in order to accomplish a cure, there should be a steady perseverance in general for some years;—still it is frequently found that all these various methods fail, and

and nothing, except the removal into a warm climate, will so well eradicate the complaint—though we have instances of people being cured by living a series of time upon the sea coast.

With regard to all external applications, those of the astringent and stimulant class are the best, such as water of acetated litharge, (139.) diluted—sea-water, water with every kind of saline or mineral impregnation—cold water alone hath often produced a good effect; for these promote circulation through the vessels, and give firmness to the parts already in too great a state of relaxation. These, however, come more under the surgeon's hands; and therefore we refer the reader to the works of Mr. Wiseman, Heister, and Bell, which may be consulted on this subject with advantage. With respect to diet, it should be of the light, dry, and easily digestible kind—all viscid food should be carefully avoided---sleep should be taken moderately--and also gentle and constant exercise, particularly in a dry, warm air; for moist situations, and those which are cold, are extremely pernicious---and also frictions will be beneficial---in fine, every thing that will keep up a free and regular state of perspiration, and assist in invigorating the system, should be solicitously observed;

§ 6. CANCER.

This we may sometimes trace from the foregoing disease; for it has been observed, that some of those who, in the early periods of their lives, have shewn appearances of scrophula, have in the more advanced stages been affected with cancers---hence it is not improbable but that there may be some affinity between the humours producing these two diseases. It has been called *CARSINOMA*, from the Greek word *karkinos*, cancer, a crab, from its appearance, the turgid veins running round the margin of the tumors being something similar to crabs claws--and when a hard scirrhus tumor begins to be unequal--puts on a livid colour--has acute darting pains shooting through it--and at the same time veins surrounding it being distended, and having a serpentine appearance, called varicose--these are symptoms considered as declaratory of a cancer---but, indeed, sometimes it will arise in the lips, gums, tongue, and some other parts of the body, without the appearance of scirrhus preceding it.

When this tumor lurks under the skin, it is called *OCCULT*--but when it becomes ulcerated, it then is called *OPEN*, and is distinguished by a very offensive and fœtid discharge---the lips of the ulcer inverted--an hardness of the skin, an exudation of a

thin, acrimonious fluid--pricking, darting pain, very acute, and obstinate resistance to every application.

Like serophulous tumors cancerous ones are lumpy, unequal; but exceed these and every other species of tumor in hardness, though, whilst they remain in an indolent state, and without any discolouration in the skin, they are termed SCIRRHI--when an itching is perceptible, succeeded by the darting pain we have before described, the skin turns darkish or livid, and the veins under the skin put on a varicose appearance (475.) in the part affected, they then are considered as CANCERS.

DESCRIPTION. A cancer in the beginning is generally small, and increases gradually; and notwithstanding the changes of the colour of the skin already mentioned, and that of becoming painful from being indolent, it is sometimes very difficult to determine, when the transition from one state to the other takes place, because, according to concurring causes, the progress becomes quick or slow.

It has, with great judgment, been remarked, that *when peculiar kinds of burning shooting pains, an alteration of the colour of the skin to that of brownish, purple, or livid, appear, then the disease may be considered as a malignant scirrhus, or confirmed cancer*--and also when it is arrived to this state in women's breasts, the magnitude of the tumor greatly increases, and very quickly, having a knotty, unequal surface, a greater number of glands being obstructed, the nipple sinks in--full and turgid veins conspicuous, diffusing themselves some distance round the tumor, and resembling the claws of crabs.

These are deemed characteristic signs of an occult cancer externally situated; but when these pains and heat succeed in parts where the patient has before been sensible of a weight and pressure, accompanied with a dull pain, we have great reason to believe it lurks internally.

A cancer may remain in an indolent state for years, without any ulceration, yet the humour may acquire such a degree of acrimony as to erode the integuments, then commences the open cancer, from which will issue a thin fluid of so caustic a nature, that the neighbouring parts will be speedily corroded, whether hard or soft, and thus forms an ulcer so obstinate, that it is incapable of being healed by any applications yet discovered, nor can the acrimony be corrected or subdued by any known alternative--the flesh within the ulcer becomes spongy--the lips of the wound swelled, livid, and inverted--the pain intolerable, the glands of the neighbouring parts become obstructed--sometimes hemorrhages ensue, the appetite is lost--a slow fever, with wasting of the flesh, comes on--the strength fails, the patients are afflicted

disturbed with convulsions and swooning--and death, more desirable than life, closes the miserable scene.

CAUSES. The *remote* or *inducing* are said to be, suppressed evacuations—great dejection of spirits—frights and anger—a mode of living, medicines, or other diseases generating a corrosive acrimony in the blood—an increased motion in the blood, from whatever cause it may arise, cold, external irritation from friction, compression, erysipelas, or medical substances—barrenness, and a life of celibacy; for women who have lived in that state, as well as arriving at the period of menstrual cessation, are most liable to this complaint—next to those, mothers who have not suckled---afterwards, those who are past child-bearing, and those who are least subject to the disorder, are men, and women who have raised their own children by the breast.

The *proximate* or *immediate* is supposed to be, a specific corruption or putrefaction, though slow in its progress, of the humours obstructing the glands.

CURE. A true cancer, I believe, is seldom or ever cured, except by amputating the part affected---if, therefore, the complaint is in its recent state, small, solitary, and moveable---*especially if it comes from an external injury*---if it is in a free situation, neither adhering to any large vessels, nerves, ligaments, nor to the bones---the constitution being good, and in young subjects; the part affected may be taken off by the knife; and this mode is preferable to the application of any caustic substances---but, in all these cases, where operations are to be performed, or external applications made use of, the best advice we can give is, for the patients to depend on the judgment of some cautious and experienced surgeon.

With regard to medical assistance in those scirrhus tumors, before they have put on the positive appearance of cancer, experience authorises us to recommend bleeding, to take off the general fullness of the habit---afterwards the application of leeches to the part affected, and that repeated, as occasion may require, and now and then exhibiting a cooling purgative---indeed, where we are led to believe there may be a cancerous tendency, from some degree and continuance of pain, topical bleeding is necessary, and the application of poultices made of hemlock leaves, with the internal exhibition of the same medicine, (152.) in extract of powder, has apparently stopped the progress of the complaint. Indeed, in these three cases of scirrhus of the uterus, by the proper management of hemlock, corrosive sublimate, opium, and some arsenical preparations, I have known great benefit to be derived---one of which, the most violent, occurred at Knightbridge lately, when I attended

tended with Mr. Williams, an attentive and judicious practitioner, the patient was a person of delicate habit, subject to hysteric affections, from strong nervous incitability, and whose muscular system was also more than commonly irritable---she complained of excruciating pain in the lower part of the belly---her pulse was quick, skin dry, totally restless, and very thirsty, she now and then complained of chillness, which was always succeeded by a heat of the skin, and a quickness of the pulse, that always increased towards evening, and went off by copious perspiration, the womb was apparently much enlarged, very hard, and pressed low down into the pelvis, she complained of pains darting through the lower part of the belly, and, from the weight and pain was altogether incapable of walking, nor could be moved from her bed without great agony---whatever she took for some time she vomited up, so that she received, for the space of three weeks, little or no nourishment---she was also often and strongly affected with that unpleasant sense of suffocation, or choaking, from the contraction of the throat, called *globus hystericus*---she had also through the vagina a very offensive and acrimonious discharge, which, from excoriating the parts, occasioned her much additional uneasiness, however, by the use of hemlock, corrosive sublimate, and a solution of arsenic given internally, after her feverish symptoms were abated, by the use of saline medicines, alleviating her pains by opiates, and keeping the bowels open by mild aperients, she was enabled to leave her bed, was totally freed from all pain, and has continued apparently so well for some months, that she enjoys a state of health superior to what she experienced for some time before her indisposition began to be so severe. I should also have observed, that she made use of an injection formed of a decoction of hemlock and poppy heads.

In all cases of cancer, whether occult or ulcerated, the patients should be kept on cooling diet, milk whey, and milk, with the use of warm baths, and, perhaps, whilst the cancer is in the former state, wearing a hare or rabbit skin over the part affected is extremely useful---the pain should be moderated by occasional bleeding, cooling purges, a spare, thin, cooling diet, and gentle opiates; cordials, exercise, and whatever can give too quick motion to the circulating fluids, or increase the heat of the machine, should be avoided.

The purgatives proper to be used are Glauber's salt, sal polychrest, or some other of the cooling and gentle purgatives, (171, 172)---and in cases of febrile affections, saline mixtures, or nitrous medicines, (No. 1, 2.) are advisable---and for drink, milk and water, or sassailla decoction.

Hemlock joined with bark, and small doses of corrosive sublimate, has by some been ranked among the most efficacious of all cancerous medicines—half a grain of the latter of which, dissolved in spirits of wine, and given in cancers of the face and nose, night and morning, has been recommended as very beneficial—in cancers of the breast, an infusion of deadly nightshade has been considered as the most useful.

Of hemlock, the fresh juice is thought more efficacious than the extract, beginning with four or five drops, and gradually increasing the dose.

With respect to external applications, various are the materials recommended in this point, such as poultices of hemlock, goose-grass, carrot, solutions of arsenic, lead, acetated cerufs, fixable air, &c. but as it is our province only to treat on complaints medically, we must refer our readers to the works of surgical authors on this part of the subject.

§ 8. CLAP, OR GONORRHOEA VIRULENTA; POX, OR THE LUES VENEREA.

Notwithstanding there are authors who consider these as two distinct diseases, and give it as their opinion, that they arise not from the same contagious matter, I shall beg leave to treat them under one and the same head, perfectly persuaded that they are the same disease, under different constitutional circumstances—the first acquired from the matter acting locally, the second from its being absorbed into the habit, and being more general in its effects—for I certainly have known the lues arise from the injudicious treatment of a gonorrhœa—and have seen patients who, having had commerce with the same woman, differently affected—the one labouring under a gonorrhœa only, the other completely poxed—Besides, I have known some men, who, in their intercourse, when unfortunately diseased, have never experienced the former, but were always affected with the latter.

I should therefore consider the gonorrhœa virulenta as the morbid matter acting in its simplest state, and the lues in its more diffused and confirmed state.

And, first, of the GONORRHOEA, improperly so called, as the term imports a flux of semen, from the Greek *gone*, semen, seed, and *reo*, fluo, to flow, which is not the case, the discharge being nothing more than a flow of mucus similar to what issues from all inflamed surfaces. See EXUDATION. (300, 301.) I shall consider it, therefore, as a VIRULENT MUCO-PURIFORM GLEET—the method of preventing which, after commerce with a suspicious

cious woman, has been pointed out, (101.) the means must be supplied of discovering and curing it, when it has begun to exert itself.

DESCRIPTION. To this complaint both sexes are equally liable--and it is generally allowed to manifest itself in each in the following manner :

IN THE MEN--some days, from four to six, seldom longer, after the reception of the contagious matter, there arises not an unpleasant titillation in the glands of the penis, (55.) in the orifice of the urethra, (54.) there appears a little thin liquid--soon after which the orifice swells, grows red, with a degree of heat, and is more than commonly open--in a small space of time there is a sensation in making water, hot and scalding, and something like the pricking of needles--a kind of matter, more viscid than the former, and in larger quantity, makes its appearance, issuing from the urethra--that when the disease is more violent in its attack, through the course of the urethra, as far as the neck of the bladder, there is perceived a sort of tightness or fullness, attended most commonly with erections, more frequent and painful than usual--the inflammation now begins to increase, if left to itself, every day, consequently the heat and pain, and the discharge puts on a yellow or greenish appearance, sometimes mixed with bloody streaks--if the inflammation runs high, there will not unfrequently be pains in the groins, testicles, and loins--sometimes a stranguary, (367.) will come on, and the patient at night will be tormented with erections, and a bending downwards of the penis, called **CHORDLE**.

At length all these symptoms grow milder as the inflammation abates--the discharge becomes white, and more uniform, and at last issues from the urethra white and viscid like a fine thread, gradually diminishing, 'till appearing, now and then only, in drops, it totally ceases.

This is the description when it pursues its natural course, accounted for by the inflammation receding by degrees.

IN THE WOMEN, it discovers itself by a sense of itching at first in the external orifice of the vagina, (51.) and a more than common moisture--in a few days the parts begin to inflame, grow hot, swell, and become very painful, occasioning a scalding in making water, but not so painful as in men--add to these, a discharge of virulent discoloured muco-puriform matter makes its appearance ; and, as the inflammation goes off, becomes white and more viscid, and by degrees entirely ceases.

With these appearances, we should naturally conclude that a patient had received the virus ; but this is not always the case ; for the very same may rise from other causes not associated with
the

the venereal taint, as very severe exercise—hard riding, and immoderate drinking—the too copious use of very heating stimulants, using too caustic injection by way of prevention—or, in fine, whatever will bring on an inflammation of those parts. I mention this, because sometimes, particularly when these circumstances arise in married people, it is essentially necessary to make the proper distinction, to save the peace of a family—as I have seen that peace nearly destroyed by the indiscretion and rashness of a practitioner, pronouncing in a husband that discharge venereal, where the ties of connubial honour had never been infringed, and where the character of the wife was, with great justice, unfulfilled. In our opinions, therefore, we should be extremely cautious, and wait for the appearance of some unequivocal symptom before we pronounce positively, particularly as the first stage of the disease may be cured in the same manner as should be advised in cases of simple inflammation without any venereal taint.

This complaint we consider as a virulent muco-puriform gleet, arising from irritation, produced by venereal virus, after impure concubinage, attended with inflammation of the urethra, a flux from thence of puriform mucus, and a heat or scalding in making water.

The common term CLAP arises from the old French word *clapieres*, which were single shops, kept and inhabited by single prostitutes, and generally confined to particular parts of the town.

CURE. The indications are, to take off the inflammation, and give strength afterwards to the vessels, which have been weakened by too strong action and distension.

If, therefore, at the onset of the disease, the patient is of a plethoric habit, strong stamina, possessed of great vascular irritability, we must have recourse to bleeding and gentle aperients for two or three days, and plentiful dilution with watery fluids, such as barley-water, linseed-tea, marsh-mallow-tea, or solution of gum arabic in warm water—bathing the penis once or twice a day in warm milk and water, or poppy head decoction—keeping the glans clean, and supporting the testes by a suspensor.

The opening medicines may be given occasionally, so that two or three stools may be procured every day, (No. 23, 24, 66, 97, 99, 135.) any of which, as best suits the patient, may be administered.

After three or four days, when the discharge begin to flow copiously, we must alleviate the inflammation by the sedative injection, (No. 164.) which should be thrown gently up the

urethra two or three times a day, and retained for some time after each operation—when this has been used for four or five days, or sometimes longer, 'till the painful symptoms appear to be yielding, and the discharge alters its colour, and grows more viscid, to this may be added six or eight grains of acetated cerufs, and applied in the same manner, and in a few days more the cure will be often completed—but the discharge in some cases will be of longer duration, from the relaxed state of the vessels, brought on by the preceding inflammation—when this is the case, the discharge is much whiter, or clear—the consistence viscid and ropy, under which circumstances, we must have recourse to the restraining injection, (No. 165.) or that made with calomel, (No. 166.) for this acts as a local stimulant, and may therefore be serviceable.

But though this method will generally succeed, there is sometimes one symptom extremely troublesome, and calls for particular attention, should it be violent, which belongs to the first stage of this complaint, that is, the CHORDEE, so called from the Greek word *chorde*—this is a contraction of the under part of the penis, which, when it is erected, and only then, is painful, and feels as if pulled down with a chord—this pain is chiefly under the frænum, (a membranous ligament under the penis, which ties the præpuce to the glans,) and along the duct of the urethra, for the alleviation of this symptom, low living is particularly necessary—gentle exercise—avoiding all inebriating liquids—lascivious conversation, and the company of lewd women—the penis may be bathed often in a day with warm milk and water, or the sedative fomentation, (No. 111.) may be used, keeping the glans covered with the præpuce during the operation—and poultices of bread and milk may be applied to the parts.

Bleeding with leeches upon the part has been highly useful—wearing tight drawers, by which means the penis may be confined downwards to the thigh, and erections prevented, which greatly aggravate the painful affection.

Sometimes it will happen, that, from the violence of the irritation, the secretion of the mucus seems to be totally suspended, or, at least, considerably diminished, so that no discharge, or only a very trifling one, takes place, though the other symptoms rage with great violence, under these circumstances we must have recourse to bleeding, emollient applications, fomentations, (No. 85 or 111.) and poultices, these are necessary to abate the irritation, and bring on the discharge—and here also opiates are necessary—afterwards we must have recourse to the same remedies as we have before specified.

Besides

Besides the symptoms we have repeated, sometimes uneasiness in the glands of the groins, and swelling, called *bubo*, and similar effects in the testicles, occasioning pain and tumefactions, will occur; but these arise from sympathy, where no absorption of virus has taken place, and will yield to the same modes of treatment as above laid down, consisting of the cooling plan and topical sedatives.

But when the virus is absorbed into the habit, it gives rise to to variety of complaints, which have received various appellations from the parts affected, but are all owing to one and the same cause. The disease then is considered as the FOX, or LUES VENEREA, which may be communicated to the habit, wherever the venereal virus gets insinuated into any part which is wounded or ulcerated, or from ulcers formed by its own acrimony, or from parts being touched by it where the skin is abraded—and the places where the acrimony first makes its entrance, are those where the disease in general first makes its appearance—and as coition is the most common way of contracting it, so the first symptoms most frequently appear somewhere upon the genitals.

DESCRIPTION. We may justly suspect that the virus is diffused through the general mass of lymph, if the local symptoms, such as shankers, buboes, &c. do not give way to the usual methods of cure, or, when cured, if they break out again without fresh contagion—but if, at the same time, we find ulcers breaking out in the throat, dry scabby eruptions on the skin, or hard callous tubercles, or pustules covered with a yellow scab, and appearing chiefly on the hairy parts, we may be certain that the case is confirmed.

But sometimes these symptoms appear without any disease of the genitals, and may be produced by other species of acrimony---it may be necessary to give what we considered their characteristic appearance.

Venereal eruptions have a branny appearance, and are superficial, unattended with itching, and the scales being picked off, the skin appears of a reddish brown, or rather copper colour underneath.

The *tubercles* or *pustules*, seldom occupy the cheeks or the nose, nor have a purulent apex, but are covered at top, either with a dry branny scurf, like the eruptions just mentioned, or else with a hard dry scab of a tawny yellow colour; they particularly break out amongst the hair, or near it, on the forehead or temples.

Venereal ulcers of the mouth first affect the tonsils, avula, and fauces, then sometimes, though very rarely, the gums---frequently extend to the nose, and are callous or hard in their

edges---they are circumscribed, and, for the most part, circular, at least they are confined to certain places---are generally hollow, and most commonly covered with a white or yellowish slough at the bottom --are red in their circumference, and frequently corrupt the adjacent bones---and are also, in general, combined with symptoms known to be venereal.

With respect to pains, those which are deep seated, particularly of the arms, head, and shins, always fixed in the same place, and which affect the middle and more solid part of the bones of the arms and legs, and those of the head, raging chiefly and with great violence in the fore part of the night, may be held as sure signs of this disease—but other wandering pains of the membranes of the muscles, and the ligaments of the joints, though they may arise from a venereal taint, they cannot be considered as certain signs without other symptoms of the lues are apparent at the same time.

Hard indolent swellings in different parts of the body, as in those which are fleshy—in the periosteum; upon the tendons; upon the ligaments; or upon the bones, or those extuberances at the verge of the anus, called *fici*; though they are all of them signs of a confirmed lues, if they are not preceded or accompanied by some certain signs of this disease that are more certain and evident, we should be very cautious of concluding that they proceeded from venereal virus; for they may depend upon some lurking serophulous humour. And here we must observe, that when they derive their origin from this last cause, they are very seldom painful, or tend to inflame or suppurate, whereas those which are venereal usually do; and, if they lie upon a bone, generally produce a caries---upon the large bone of the leg, fore arm, and those of the skull, these carious ulcers are most commonly met with, and when they are associated with nocturnal pains, we never can hesitate about pronouncing their specific nature.

Frequent abortions, or the exclusion of scabby, ulcerated, half-corrupted, and dead fetuses, happening without any manifest cause to disturb the fœtus before its time, or to destroy it in the womb, may be reckoned as a sure sign of one of the parents being contaminated.

The more recent the complaint is the less difficult it will be to cure---and the habit of body is a material consideration; for those whose blood is in a mild and bland state suffer less considerably than those who have their juices acrimonious; for the disease is remarkably violent, and extremely difficult to cure, in scorbutic and serophulous constitutions---and in a person already inclined to asthma, pulmonary consumption, dropsy, gout,

gout, or any other chronic disorder, it is also more tedious, for the same reasons, than in one whose habit is in a sound and healthful state ; for as the original disease is increased by the accession of the venereal virus, or the lues is aggravated by being joined to a new disorder, insomuch as the constitution labours under complicated mischiefs.

The remote symptoms arise, and the more they affect the bones, so much the more difficult the cure ; because the venereal virus appears to occupy the minute parts of the habit, and be very universally diffused through the humours—but the malady becomes incurable if the virus affects the brain, the lungs, the liver, or any of the nobler internal parts, the patients will either sink under that consumption called tabes, or die apoplectic.

CAUSES. The *remote* or *inducing* are, all those applications which inflame or dry up local venereal ulcerations, whether astringent given internally, or exhibited externally, or the discussion of buboes without the exhibition of mercury.

CURE. The indication is, to free the habit from the venereal contagion, which may always be done by mercury in some shape or other, either alone, or combined with some other medicines, which the peculiarity of the constitution may demand, as in every species of this complaint, or every complaint arising from this source, where we are called in before the virus has got firmly rooted in some of the more noble organs of vitality.

Different practitioners have been fond of different preparations of mercury, and different modes of throwing it into the habit.

Some advise calomel to be rubbed on the inside of the lips, or cheek, to the quantity of four grains every day, and let it be taken into the habit by the absorbent system.

Others prefer the mercurial ointment, (No. 167) from half a dram to two drams to be rubbed on the inside of the thighs above the knee once or twice a day for some space of time, 'till all the venereal symptoms vanish.

Some have been fond of calcined mercury, (160.) and opium, half a grain of each formed into a pill, and taken night and morning, with a decoction of the woods, (No. 88.) increasing the dose to a grain each or more.

Others have given the preference to the corrosive sublimate solution, (No. 168.) mixed with half a pint of barley water, or decoction of the woods, (No. 88.) to be taken night and morning.

The patients should lie in bed to sweat after taking the medicine, and they ought to drink plentifully of whey, barley water,

ter, or some such liquid, throughout the day—and if the medicine acts not as a gentle aperient, a mild purge may be given occasionally. It has been observed, that those whom it purges two or three times a day get well sooner than those whom it does not purge—it very seldom affects the mouth, but promotes discharge by urine and the skin. This course is to be continued some weeks after all the symptoms disappear—and the decoction of the woods should be taken for some time after the solution is left off.

Some prefer the sublimate pills, (No. 169.) under the idea of their being more easily and safely taken in greater quantity, and from the stomach bearing it better in this way; for the pills, gradually dissolving, are said not to affect the stomach suddenly as the solution drank.

However, I think quicksilver mechanically divided into its most minute parts, which art is capable of completing, the best mode of administration, as in the mercurial gummos solution, (No. 170.) or the mercurial gummos pill, (No. 171.) as the form best pleases.

These seldom produce salivation, if some purgative is exhibited every tenth day, and are said quickly, safely, and pleasantly to take off all the effects of venereal virus, where no chyrurgical operation is necessary, and then to be highly useful in expediting the cure; for by this mode of administration, a sufficient quantity of this powerful medicine may be thrown into the habit with the greatest ease, without producing those violent effects the saline mercurials are very apt to occasion—and, perhaps, it is from this power of filling the habit by these mild means upon which its superior efficacy depends.

For children, where mercury is necessary to be given, the mercurial syrup, (No. 172.) for obvious reasons, claims the preference.

Where mercury given in these modes fail, which, under proper management, it rarely does, corrosive sublimate has been recommended—esteemed by many the most preferable preparation in venereal diseases of the skin, and those of the bones.

Some cases there are, however, which will not yield to mercury alone, and some where success has been derived by varying from time to time the mercurial preparations administered, and conjoining them frequently with cicuta—administering sarsaparilla decoction, that of mezereon, (No. 173.) or bark with chalybeates, or cooling medicines, opiates, antispasmodics, or cordials, such as the constitutional circumstances required. But here the sagacity of the practitioner must be left to make the necessary distinction, as it is impossible to point out up upon
paper

paper precisely the deviations which may occur. We shall only observe, that where the disease resists the modes we have laid down, the practitioner must labour to find the constitutional defect, and combine with mercury other remedies appropriated to its relief.

Besides, there are now and then some venereal symptoms which will remain, notwithstanding the mercurial course being properly persisted in, such as nodes, and swellings of the perio-steum—these are sometimes cured by the mezereon decoction, (No. 173.) or the compound one of sarsaparilla persisted in for a long continuance of time, which will be aided much by the warmth of a southern clime. As for other local affections, surgical assistance is not immediately necessary; for healing up of shankers, and discharging buboes by too hasty external applications, has often created mischief—cleanliness and dry lint, in the first instance, and depending on internal remedies for the cure of both, is by much the soundest practice, and will almost always answer, if the complaints are simply venereal—if otherwise, and they obstinately resist this mode, the skill of a surgeon may become a necessary auxiliary.

With respect to a salivation, it is seldom, if ever at all, necessary—however, if it is determined on, before the course is begun, should the patient be of a full habit, it is adviseable to take away some blood—have recourse to the warm or vapour bath, two or three times, and clear the stomach and bowels with a dose of gentle physic—then let the patient put on a flannel shirt—and half a dram of mercurial ointment, (No. 167.) must be rubbed in on the inside of the thighs every evening, gradually increasing the quantity to two drams, or more, if the constitution requires it, 'till a spitting is brought on—and this must be kept up for a fortnight after every venereal symptom has disappeared—the patient should drink plentifully of some diluting liquid, as barley water with gum arabic, marsh-mallow tea, or such like—and persist in a light, easily digestible diet---avoid the cool air---and spit from a pint to a quart every day---the more gradually the salivation is brought on the better.

If we want to prevent the mercury from laying too strong hold of the mouth, it must be diverted to the skin, by keeping the patient in a constant state of perspiration, from the warmth of the room, by drinking plentifully of warm, diluting watery liquids—or, should he wish to avoid a spitting, the patient should take from time to time some gentle physic, or get into a vapour bath—and this mode is thought by some the most adviseable, as by these means we shall be enabled to throw in a
large

large quantity of mercury—if inflammatory symptoms occur, we must have recourse to bleeding, and confine the patient to a low diet, and copious dilution with watery mucilaginous fluids—but should the strength be much reduced, a nourishing diet, with wine, infusion of bark, and some chalybeate preparation, and a free country air, are proper.

After the course is completed, and the cure performed, the patients should return to their usual modes of living, as has been repeatedly recommended, when recovering from any acute disease that has much harrassed the constitution.



S E C T I O N XX.

WE now are to treat of diseases of the skin—some of which are considered merely as local complaints of the skin itself, beginning in, and not extending themselves farther than that part of the machine; whilst others depend on acrid states of the humours, and are more generally diffusive through the habit, putting on different appearances, according to the parts they affect, and very often alternating with those on the skin; so that, on the expulsion of the acrimonious humours, they manifest themselves on the exterior surface of the machine; and on being expelled, occasion internal affections.

We shall, therefore, form this class of complaints into two divisions, after particularizing some, and from thence deduce our general modes of cure.

And, first, of the

§ 1. ITCH;

so called from the effect it produces. Different are the causes from which this complaint may arise, as the scurvy, so called, lues venerea, &c.—but as these eruptions are only symptomatic, when thus derived, we shall confine ourselves to the common itch.

DESCRIPTION. This is discoverable by small spots about the size of a millet seed, or somewhat larger, which, broken by scratching, form a scab, itch violently—it is contagious, and chiefly affects the hands.

This disorder chiefly begins between the fingers—red, hot vesicles, full of acrid serum, make their appearance, to which,
by

by scratching, dry, rough scabs, attended with great itching, succeed.

But this, according to the state of humours being more or less in a bland or acrimonious state, puts on different appearances—hence the spots, instead of being merely vesicular, will have here and there appearances of matter contained in them, especially if the disease has been of any continuance, and the patients very dirty—however, we may in general discover some spots manifesting the true itch, particularly in the places where there is the most warmth, as between the fingers, in the bend of the arm, under the arm-pit, in the interior part below the knee.

Children are more subject to it than adults—delicate habits with soft smooth skins, and adults more than old people—all which is owing to the softness and moisture of the skin, and quicker sensibility of that part in one than another.

The CAUSE is universally believed to be, animalculæ in the skin—and, from the idea of this complaint so founded, a number of the appearances is readily and satisfactorily accounted for, as why it is attended with itching, why caught by contagion---and why it returns after sometimes being cured.

The itching is occasioned by these animalculæ irritating the fibres in the places where they are lodged--hence raising a very minute blister, which, provoking us to scratch, is burst, and serum then oozes out and forms a scab--and these animalculæ running under the cuticle, or scarf skin, (25.) deposit their eggs in various parts, which, by the heat of the machine, are hatched, and thus the disease spreads itself--by contagion, it is communicated either by the animalculæ themselves getting from the affected to the sound person--or from touching any soft substance where they may be lodged--or from the person receiving some of the eggs upon the cuticle, which are rubbed into the furrows, and there lay a proper time for producing their young---and probably its return may be owing to the eggs not being totally destroyed in such as were affected, and apparently cured.

Sometimes little prominent spots, itching and crowding together, neither excoriated nor scabby, will affect the skin, from a retention of acrid perspirable matter, made more acrimonious by stagnating in the small cryptæ, hollow places like cavities, containing some fluid, and small glands, called sebaceous glands, of the skin and face--these are called TETTERS or HERPES, from *er-po*, repo, to creep, because they creep from place to place, and, like the former, are only inherent in the part affected, and do not contaminate the mass of fluids.

These we give as specimens of eruptions from external causes—these happen indiscriminately to all people.

But in infants, or the younger class of mankind, the skin is often eroded with an acrimonious serum, and more frequently the hairy scalp in the skin, which begins at first to grow moist, with an itching—hence children rub their heads against the pillows, or any other thing they lie upon—when this disease is in its beginning, a rather acid and very nauseous smell may be perceived—hence some have called such eruptions *ACORES*, from acer, sharp or sour—afterwards the skin begins to grow red, becomes granulous, then they have named it *HERPES*, *MILIARIS*, *miliary tetter*, because the disease spreads and creeps along, and spots like millet-seed are prominent above the skin—others have called it *FICOSUS*, from ficus, a fig, because in the skin the eruptions look like the small round seeds of a fig cut in two—then is the efflux of serum augmented, which in a small space of time are concreted into foul scabs, which sometimes are so thick, that they are penetrated with many very small apertures, and now permit a somewhat thicker humour to ooze out; but that begins to adhere on all sides to the crust or scab, increasing its thickness, grows putrid, erodes the skin, and there degenerate into deep ulcers, which pour forth an extremely fœtid humour; and, as a moth-worm destroys cloaths, so does this the skin—hence is derived the term

§ 2. TINEA,

a moth-worm. It has also been called *FAVUS*, from its resemblance to a honey-comb—and in English *SCALD-HEAD*, from scald, scruffy or scabby, and head—when on the head it bears that name—when on the face, *CRUSTA LACTEA*, or *milk scab*—indeed they both have been reduced to the same species, and called *HESPE PUSTULOSUS*, *pustulous tetter*, and this is considered as the mildest of all, infesting the forehead and temples, but occurs only in infants one or two years old whilst they make use of milk—hence the term *CRUSTA LACTERA*, or *milk scab*.

DESCRIPTION. This, to which we shall confine ourselves, begins with numerous little vesicles, or bladdery appearances, full of an oily fluid, cohering together, at first white, afterwards yellow—these vesicles, dried and shrunk up, pour forth a small quantity of colourless liquid milk, which, being dried, forms scabs; and they are either dry, or moist, white, or yellow, seldom brown—they itch, from whence the child scratches them off, which, being removed, the skin appears bright; but very often there appears small apertures, whence again flows out a viscid humour,

humour, forming scabs--the disease cured, the skin remains perfect, and free from any defect.

This affection sometimes creeps to the posterior part of the head, ears, chin, neck, and, indeed, through the whole surface of the body.

Gross, fat children are liable to be affected with this, who abound with milk, who suck fat-greedy nurses, full of milk---it also occurs in children replete with the seeds of the scrophula, (469.) not yet making its appearance, or whose blood is vitiated with acrimony, from the faults of nurses--who are irascible, fond of liquor, scrophulous, or subject to any acrimony of their fluids.

§ 3. LEPROSY.

from the Greek word *lepros*, asper, rough, because the skin becomes rough with scales--and *ELEPHANTIASIS*, from *elephas*, an elephant, because this disorder creates some appearances in the legs like those of an elephant. From the accounts given by *ARETÆUS* and *CELSUS*, many have taken the two diseases to be the same, only in different degrees, supposing the *LEPROSY* more superficial, the *ELEPHANTIASIS* more deep-seated, calling one the leprosy of the Greeks, the other the leprosy of the Arabians---but modern authors have divided them into different genera, and have given us separate symptoms by which they may be distinguished--however, we shall confine ourselves to the former, as the elephantiasis, though endemic in Egypt, seems totally abolished in Europe.

DESCRIPTION. This is discoverable by hard, thick pustules or tubercles, or dry scales like warts, rather of a reddish colour, affecting the face and hands, without pain, sometimes the whole body, though in the vicinity there is an itching, and sometimes these pustulous eruptions themselves itch also---the skin frequently near them is rather pasty, commonly destitute of sensation, and the legs affected with a soft, pale, and in elastic swelling--sometimes the eruptions ulcerate, and afterwards become scabby--if a number of these make their appearance, it is called the *moist* leprosy--if otherwise, the *dry*.

Sometimes different parts of the body will be covered with dry scales, which are white, and lay one upon the other like the scales of a fish--these are large, and, amongst the people of Asia are surrounded with a red circle; and some have observed, that the eruptions were not only scaly, but smelt like fish--hence this kind of leprosy was called *ITCHYOSIS*, from the Greek word *ikthys* piscis, a fish.

Now, the tinea and leprosy we take to depend upon some acrimonious humour diffused through the habit, and, by the efforts of nature, deposited upon the skin.

According, then, to the causes and constitutional circumstances do we form our indications of cure; for having not, in the ITCH and TETTER here recited, occasion to fear any ill consequences to be derived from repelling any humour into the habit, and the causes creating them being merely external, external applications will be sufficient to form a radical cure, at least very trifling assistance will be requisite from internal remedies---whilst in the SCALD HEAD and LEPROSY, such internal remedies are necessary as will clear the habit of those acrimonious humours, by promoting regularly and constantly some of the natural evacuations, particularly that of perspiration and urine, and, at the same time, so supporting the strength of the system, and especially that of the digestive powers, that soft, mild, nutritious fluids may supply the place of those which are evacuated, and the disposition which the constitution has to generate acrimony so offensive may be altered as much as in the power of medical aid to accomplish---and indeed the same modes will hold good in all the variety of eruptive complaints, unattended with any fever of moment, which are of long continuance, and come under the denomination of land scurvy, &c. and which we have not before specified.

In order, therefore, to exemplify the different modes, we shall proceed to speak of the cure of the four just now mentioned---and, first, of the itch, whose

CHARACTERISTIC SIGNS are, pustules, or itching small ulcers, contagious, and chiefly affecting the hands, from small animalculæ irritating the skin below the cuticle.

CURE. In strong robust constitutions, it may be adviseable to take away some blood, and give a dose or two of gentle physic---then let the skin be well cleaned, by going into the warm bath, and afterwards have recourse to some of the applications, (from No. 174 to 177.)---With regard to sulphur, we must observe, that what is called sulphur vivum is preferable in these cases as an external application, because, in forming flowers, it loses much of its efficacy---the flowers are also ordered to be taken internally, as it is supposed that some of the animalcula might be too deep-seated for the ointment to affect them, hence might they be reached by the streams passing through the skin---indeed, coupled with a little cream of tartar, it makes an agreeable opening and diaphoretic medicine.

With the mercurial wash and ointment it will be sufficient to wash or anoint the parts affected, or to rub some of the latter into

into the palms of the hands or wrists---and it would be right now and then to take some gentle physic, and drink copiously of some aqueous liquid, to prevent the mercury from affecting the mouth.

If the complaint proves obstinate, as it will sometimes do if it is of the dry species, warm baths may be used during the external applications, and small doses of antimonials, (180) and mercurials, (160.) exhibited with a decoction of the woods, (No. 88, 89.)---but these are seldom necessary, though they are useful as auxiliaries, where the acrid state of the humours is a concomitant. Notwithstanding mercurials have been advised, and almost always succeed in the cure of this complaint, there have been instances where it has continued, even after the patient has gone through a salivation---under these circumstances, where mercury has not been efficacious, sulphur is our dernier resort.

With regard to the herpes or tetter, it is cured by topical applications, and of such kinds as by their stimulus and astringency give strength and firmness to the part affected, so that the matter of perspiration is made to pass off freely, and prevented from accumulating on account of the weakness and relaxed state of the places wherein the complaint manifests itself---of remedies of this sort there are a great variety, such as ink, water of kali, oil from burnt paper, rags or wood which is acrid; this is to be diluted with fasting saliva, and the part affected anointed with it---but the most preferable is a wash formed of ten grains of muriated quicksilver dissolved in a pint of water; solutions of the preparations of lead, (139.) have been in the milder kind of this disease useful and efficacious.

The TIENA, or SCALD HEAD, that species to which we confine ourselves, has for its CHARACTERISTIC SIGNS, small ulcers in the skin of the hairy scalp, at the roots of the hair, oozing out a humour running into a white, dryish scab--when this happens to children otherwise apparently healthy, the body should be kept open with mild aperients, such as magnesia and rhubarb, or Polychrest salt, in properly proportioned doses; the hair kept close cut and short--the parts clean, by washing them with soap and water---and a moderate diet prescribed.

Indeed, it is usually cured by weaning the child, or changing the nurse, whose milk is younger, thinner, and less loaded with oily matter.

These children get the teeth later, and with more difficulty---their bowels are costive---and often there appears a propensity to rickets---without the eruption should be imprudently repelled, nothing else is necessary to be done---but if it should be

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attended with an acrimony of the humours, and spreads itself to different parts of the body, a young nurse should be chosen whose milk is bland and well diluted, not rich and thick; she therefore should live on liquid or moistening food; at the same time, if restless, gentle opiates may be now and then given to procure sleep.

Should this complaint prove obstinate, and be attended with great itching, a paleness of the countenance, and the fleshy parts appear relaxed and flabby, here we must have recourse to small doses of calomel, as an alterative, and antimonial wine, with the same intent, proportioning the doses to the state of the stomach and bowels, that the one may not purge, nor the other occasion too constant sickness or nausea.

To allay the itching, the head must be rubbed with oil of sweet almonds--several recommend the pitch ointment of the Edinburgh Dispensatory, which I have found effectual--cream mixed with chalk in fine powder--solutions of the preparations of lead, and that of muriated quicksilver, as in case of tetter, may be had recourse to.

In every eruption of tettery kind to which children are liable, of which the scald head we consider one, Mr. Bell asserts, the sulphur, in some form or other, commonly proves the most effectual application, therefore, in failure of other remedies, sulphur should be employed.

However, of these remedies I should recommend a very cautious use, because I have seen great mischiefs occur from the injudicious application of stimulants and repellents in some cases, from the idea of the complaint being merely cuticular, borrowing nothing from the habit in general--indeed, so obvious has it been, that soon after the repulsion of the humour, coughs, and febrile symptoms have come on--uneasiness in the bowels--perceptible emaciation, which, upon the reappearance of the complaint, have all gone off--in a country town, where it was the practice of the old women to cure the scald head with pepper and butter, it very often proved fatal.

I should therefore advise that cleanliness, change of nurses, or weaning, with the use of gentle purgatives, should be first tried--if these succeed not, the use of alteratives and antimonials, or the ponderous muriated earth, should be tried for some time, and issues, before recourse should be had to any of the preparations of lead, mercury, or sulphur, then they might be tried with safety, as I have from experience been convinced--and these issues should be continued 'till the complaint be totally cured, and the constitution has recovered its usual strength and firmness--when this has been repelled, it has been thought advisable to endeavour

your to solicit the complaint back again, if any internal symptoms manifested themselves, which, it is said, may be done by the application of the leaves of bete to the part originally affected; but of this I have had no experience--it might, however, be tried, whilst the other internal remedies above recommended to carry off the humour were persisted in.

In the CURE of the LEPROSY, whose CHARACTERISTIC SYMPTOMS are, the skin rough, with white eschars, which have a branny appearance, and are chapped---sometimes moist underneath and itching--warm baths, a clear pure air, with a thin laxative diet, are essentially necessary---and also the use of antimonials and mercurials--though a salivation exasperates this disease, six grains of calomel, with one of camphor, may be exhibited once a week, and purged off with a common purging draught in the morning.

Dr. RUSSEL asserts, he cured the dry leprosy in the course of a month, by giving a bolus made of the flesh of vipers, twenty grains, and one of camphor, with a little conserve of roses, every night, and the morning following half a pint of sea-water --viper broth, or chicken broth with vipers, has been considered as beneficial---but the greatest success has been attributed to the decoction of the interior part of the elm-tree, (No. 178.) which should be continued several weeks--and should, by its use, the efflorescences be augmented, it is a pleasing symptom, as it promises a salutary termination.

We have had instances of this complaint, where the symptoms have put on a high degree of violence, being cured by bark and saffrafras, (No. 179.) and the application of a stimulant lotion, (No. 180.) night and morning, a perpetual blister being at the same time kept open between the shoulders.

In complaints of this class I have found great benefit from the judicious use of mercurials and antimonials, intermediately giving the ponderous muriated earth, with the compound decoction of sarsaparilla of the London Dispensatory-- to a quart of which I have occasionally added six drams of Peruvian bark.

Indeed, in all eruptive complaints which are united with, and proceed from an acrimony of the fluids internally diffused, and manifest themselves by symptoms which bespeak general affections of the habit, or internal local ones, I should recommend the gentle evacuating and tonic plain, on the principles we have specified in the former part of this section; and shall now proceed to speak of some complaints which have been detached from the general arrangement intentionally, and one accidentally omitted.



S E C T I O N XXI.

§ 1. INFLAMMATION OF THE WOMB.

DESCRIPTION. This complaint is attended with heat, tension, swelling, and pain in the lower part of the belly--vomiting, the mouth of the womb is so painful, that it cannot bear touch, and is drawn inwards--there is a continued fever, sometimes of the remittent kind, accompanied with chillness, delirium, tossing about of the body--the head, though chiefly the fore part, is painful, and also the eyes--convulsions of the neck, hands, and feet come on--the pain extends itself to the groins, thighs, midriff, and collar bones, associated with difficulty of breathing and pleuritic symptoms;—nausea, vomiting, hiccough, costiveness---and pain in making water also manifest themselves.

In the beginning the pulse is full and quick, afterwards weak and frequent—to which are joined faintings, coldness of the extremities, drowsiness, with a number of other dangerous and violent symptoms.

CAUSES. The womb may be affected with this complaint from all those causes which are apt to induce inflammatory affections in other parts. (See Inflammation, p. 298, &c.)—obstructed menses—or any thing which will determine the blood too freely to the womb, and create an accumulation more than naturally large in that organ. But authors have very judiciously divided it into three species—1st, Into that which affects lying-in women—2d, That which is attended with a malignant fever—and, 3d, That which deduces its origin from the milk.

IN THE FIRST OF THESE, a suppression of lochia often precedes the complaint, or it is brought on by violent efforts of the accoucheur in difficult labours, blows, compression, laceration from the fingers, or the use of instruments, retention of coagulated blood, and great force exerted in replacing a prolapsus, or falling down of the womb.

CURE. Now, where only the symptoms of common inflammation are the concomitants, such as local pain, heat, tension, and the pulse full, quick, and hard, bleeding must be had recourse to--fomentations and poultices--the patient should drink copiously of watery fluids--and take of nitrous, saline, and antimonial

monial medicines---and, in fine, the method pursued as in other inflammatory cases. (See Inflammation, &c.) Besides, here, all external pressure is to be avoided---if necessary, the urine must be drawn off by the catheter, and the rectum, (45.) emptied by glysters occasionally ;---but if the complaint arises from a suppression of the lochia, and, notwithstanding all our efforts, the pain should continue, opiates may sometimes be given with success ; for this may proceed from some spasmodic affections, occasioned by irritation.

THE SECOND most commonly proceeds from internal causes, as putrid acrid matter, or a translocation of that which creates erysipelas to the uterus, discoverable by a burning heat internally--delirium, black dry tongue, and at the same time coldness of the extremities, with a frequent and irregular pulse.

CURE. Here are required a freer use of opiates and diaphoretics, to determine the fluids to the skin, and evacuate the offending matter, because these cases seem more to depend upon irritating causes than mere inflammations---the patients, therefore, should be kept much in bed, moderately warm--drink freely of barley water, thin gruel, and these frequently repeated---go occasionally into the warm baths--and gentle diaphoretics, (180.) should be insisted upon, as antimonials in small doses, acetated ammonia, (180, 181.) nitre, (176.) and such like.

THE THIRD, is an acute febrile disease, attended with a swelling of the belly--tension, pain of the womb, thirst, head-ach, delirium, dryness of the tongue--disturbed sleep, although the lochia flow freely---and this inflammation sometimes precedes, sometimes succeeds delivery.

CURE. Here we should pursue the mode similar to what we have laid down in intestinal inflammation--large evacuations, by bleeding, purging, with diuretics, and a thin spare regimen--the milk also should be solicited into the breasts by every possible means, setting the child early to the breasts, applying cupping glasses, saline mixtures, and antimonial preparations, given at proper intervals, and the breasts kept warm.

With respect to bleeding, some have thought it unnecessary, because of the discharge of the lochia ; but in this case a larger quantity by much than what flows in that case is necessary to be taken, that death may be avoided, and the deposition of milk in the abdomen, or a milk abscess, may be prevented ;--for this disease has been said to be fatal to many women--and in opening the bodies of those who have died of this disease, a milky, thin, or grumous matter, to the quantity of a pint, has been effused in the abdomen.

But if the fever should be moderate, the lochia, sweats, and flow of milk into the breasts proper and natural--there should be no swelling of the abdomen--no head-ach, particularly if there should be a looseness and bilious stools, it will be sufficient to support these evacuations by drinking copiously mild thin gruel--taking oily medicines, and the use of sheathing glysters. See PUERPERAL FEVER. (243.)

Now, from the accounts given of these three species, the indications of cure are plainly pointed out to us. IN THE FIRST, we endeavour to take off the inflammation by the common mode directed for subduing inflammatory complaints of other parts. IN THE SECOND, we attempt to evacuate the acrimony. And IN THE LAST, to prevent the coagulation of the milk, or its effusion into parts for which it is not destined by nature, by soliciting into and keeping it in its natural reservoirs.

§ 2. MENSES;

so called from the Greek word, *mene*, *mensis*, a month, from that being the usual time of their periodic appearance--they are called, for the same reason, also MENSTRUUM, or CATAMENIA--when these flow in their natural state, there is a flux of blood from the vessels of the womb and vagina, (51.) every month--in some every three weeks---they generally first make their appearance about the age of fourteen or fifteen--sometimes at an earlier period--and go off, or cease to flow, about the age of forty-nine or fifty--sometimes sooner, if they have made their appearance at an earlier period than common---this discharge, though very salutary when it flows regularly, and in due proportion, is always attended with disagreeable consequences when it is either too profuse, too defective, or altogether obstructed.

When the menses flow too copiously, continue too long, or return too frequently, so that the machine feels evident increase of debility, this we consider as a disease, called

MENORRHAGIA, from *mene*, *mensis*, and *reo*, *fluo*, to flow, which may arise from too rapid circulation of the blood, hence called ACTIVE--or from too relaxed a state of the uterine vessels, then called PASSIVE.

IN THE FIRST CASE, it is generally preceded by head-ach--oppressed breathing, attended with heat, thirst, quick full pulse, pain of the loins, often down the thighs--and other febrile symptoms--in this case we must be exceedingly careful that we do not attempt to stop the flux of blood too suddenly, not 'till the vessels have sufficiently emptied themselves, or that has been performed

formed by art—then we are to proceed on the cooling plan, and order such remedies as will abate the too great vascular action, such as we prescribed in cases of ACTIVE hæmorrhages when on that subject, (389, &c.) such as bleeding, nitrous medicines given copiously, with cooling emulsions, and a spare cool diet, and keeping the body open, is essentially necessary—care should be taken to avoid heat—violent agitation, and exercise, and every mental, as well as corporeal exertion; for these will give too great force to the circulating fluids, and contribute to increase the complaint.

But at the early period of the disease, if what is here recommended should fail of success, small doses of ipecacuanha, (No. 133.) or tartarized antimony, (No. 6, 7.) (168.) sufficient to create nausea, or gentle vomiting; for these take off spasmodic constriction from the surface, divert the flow of humours more generally to the external parts, and hence render the circulation more equal.

On the other hand, when the face becomes pallid, the breathing is affected by very moderate exercise—the back feels weak and painful from continuing in one posture—the pulse grows feeble, the extremities become unusually cold—in the evening the feet appear pasty, and an uncommon weariness from exercise, this disease must be considered of the passive kind; and so may it also if there are frequent returns of the disease; and in the intervals of the periodic discharge, the whites, which we shall, next explain, constantly attend.

CURE. In this case we must moderate the discharge, by cold wet applications to the pubes and external parts—sponge tents dipped in vinegar and water passed up the vagina—the patient avoiding an erect posture as much as possible—lying cool on hair mattresses—by shunning external heat—using a light and cool diet—taking cool astringent drinks, with astringents, (No. 56. 138.) and opiates internally—keeping the body open with gentle aperients, and avoiding every cause of irritation.

And, in order to prevent a relapse, we must endeavour to invigorate and give strength to the system, by cold bathing, preparations of iron, and bark, and moderate exercise in a clear cool air.

The diet should be of nutritious kind—and, during the flux, all those things called cordials should be avoided—though in some passive cases, where the flow is almost constant, joined with tonic remedies, they may be highly useful—and gentle exercise in a carriage has been said to moderate and contribute to suppress the sanguinary discharge.

§ 3. LEUCORRHOEA ;

so called from the Greek *leukos*, albos, white, and *reo*, fluo, to flow, because of the discharge being generally of a white colour—also FLUOR ALBUS, white flux—it is vulgarly called the WHITES, for the same reason—this is a discharge of serous or mucous matter, sometimes white, or others yellowish, brownish, or rather greenish, from the womb and vagina.

DESCRIPTION. At first this discharge is mild and serous, which afterwards, by not passing freely off, or stagnating, becomes more thick and acrimonious, and will be different with regard to its colour and smell—indeed, those symptoms which we have enumerated as concomitants to a morbid flux of the menses from a passive cause, generally here attend—and when the discharge is excessive, or of any long continuance, pains and weakness of the loins—indigestion—and other symptoms of debility—swelling of the eye-lids—thick urine—palpitation of the heart—frequent faintings, are almost always constant concomitants ;—but in the early stages they do not frequently make their appearance to any great degree.

Indeed, the colour and consistence of the discharge alter, from a variety of circumstances, according to the nature and duration of the disease, season, climate, and constitution—in warm weather, gross habits neglecting to keep the parts clean, from quantity or acrimony painful excoriations are occasioned, inasmuch, that sometimes it has been difficult to distinguish it from the effect of some venereal taint—and here it will be necessary to advert to some concomitant circumstances—if a discharge comes on suddenly, with symptoms of heat and pain—if it is not attended with weakness or pain in the back—if the patient appears to be of a healthful strong stamina—has had no children—no miscarriages—nor severe or copious flow of the menses—if the discharge should be thin and much discoloured at first, we may then suspect something of venereal affection in the case—indeed, I have known many cured of what they called the whites by means to which a virulent gleet, or clap, most readily yield.

However, the WHITES often occur in women who are subject to too copious a flow of the menses, or have them too frequently return, and are liable to this from causes which weaken the vessels of the womb and vagina—or are of a relaxed or debilitated constitution—hence it generally affects women advanced in life, particularly those who have had children, have often miscarried, menstruated irregularly—also those who lead an inactive life ; those who are full and jolly, and whose solids are

loose

loose and flabby—the more recent and whiter the discharge, the more easy to cure the disease; the longer the continuance, and the more green or brown the colour, the more difficult.

CAUSES. Are all such as occasion a collection of serum, and weaken the vessels of the parts affected, or the habit in general—hence living in moist air—feeding on viscid too food, leading a life of indolence—using too frequently warm baths; an immoderate flow, or an obstruction of the menses; or it may be occasioned by a translocation of humours to the womb and vagina.

CURE. Now it will appear obvious, as we consider the nature of the disease, whether *local* or *general*, so must we adapt our remedies, whether it depends upon the relaxed state of the vessels of the womb primarily and principally, or we attribute it to the debilitated state of the system; in the former, we may place much dependance upon external applications of the astringent class; in the latter, some medicines internally should be exhibited, which will not only give strength to the constitution, but contribute to maintain it in that state—hence, then, according to the different circumstances of the constitution, we must regulate our modes of cure.

When it occurs in those who live sedentary and indolent lives, indulging in luxuries, and supporting themselves by a full rich diet, by which the habit will be loaded with gross humours, their mode should be altered to a diet which is more sparing, and a cooling regimen, having frequent recourse to purgatives, and a more active state of life; but to those of a more weak, relaxed state of solids, we must invigorate the constitution in the same manner as directed in too copious flow of the menses from a passive cause, (500.)—here it is of great use to keep the parts clean by frequent partial baths of cold water; and after gentle evacuations, in those who have lived indolently and luxuriously, an astringent wash of the gentle kind may be made use of, such as the restraining injection, (No. 165.) with the addition of eleven ounces of infusion of roses; in those of relaxed habits, injections of bark with alum, alum water, infusion of tormentil roots, with litharge water, or some such astringent preparations; for they are said to diminish the discharge, and, in recent cases, entirely remove it.

Sometimes from a long continuance of this disease, the humours are apt to be acrimonious and irritating, and assist in supporting the discharge; then hartshorn jellies, or those of isinglass, are agreeable and useful auxiliaries.

Sometimes those stimulants which act upon the urinary passages, and communicate their effects to the womb and vagina, have

have been thought beneficial in these cases ; Spanish flies in tincture, joined with some of the preparation of iron, and bark, have produced good effects ; balsam of copaiva ; balsam of turpentine, and those of this class, have been considered as useful.

But, in cases of long standing, I have seen much benefit derived, during the use of astringent medicines, from a stimulating plaister or blister applied to the region of the sacrum, or lower vertebræ of the back.

If the complaint proceeds from, or is supported by a vitiated state of fluids, *that* should be corrected by the use of antimonials and mercurials, taken for some time, with a decoction of the woods in lime water ; and in this state of the constitution issues are extremely serviceable ; after this course, local applications and astringents internally bid fair to produce those good effects, which they fail of doing without such an alterative plan.

§ 4. We are now to treat of the menses in a different point of view, where they are either *retained, suppressed, or flow with difficulty*, and these are all comprised under the term AMENORRHOEA, from the Greek *a, alpha*, non, *mene*, mensis, month, and *reo*, fluo, to flow.

THE FIRST OF THESE, or THE RETENTION of the menses, happens in women arrived at a state of puberty, in whom, after the usual time of their first appearance, they do not now manifest themselves ; and when at the same time there are various affections, shewing the machine to be in a state of disease.

THE SECOND, or a SUPPRESSION, in adults, in whom the menses, which have been accustomed to flow, are stopt.

THE THIRD is where they do flow, but too sparingly, attended with pain.

Now in the first of these, that disease, CHLOROSIS, from the Greek *chloros*, viridis, green, or *pallidus*, pale, from the colour of the countenance, called here the GREEN SICKNESS, is induced.

DESCRIPTION. This complaint is attended with a pallid or yellowish countenance, unassociated with any yellowness of the eyes, like that in the jaundice—small and weak pulse, at the same time languid, a want of alertness in motion, with lassitude and debility—the patients are affected with nausea, vomiting, often throw up wind, and have pain in the stomach—and, though they want appetite for common food, have a desire for such things as are not used for food, as chalk, slates, or other absorbents, green fruit—they are costive, and have other symptoms of indigestion ; the whole body is pale and flaccid ; and the feet and great part of the body become pasty—by quick

motion, particularly going up stairs, or climbing up hill, the breathing is laborious---palpitation affects the heart---fainting---sometimes a pain or giddiness in the head comes on, but more certainly pains of the back, loins, and hips. Now these symptoms are among the certain signs of this disease, when advanced to any considerable degree; indeed, in the earlier stages most of them prevail, but not to that excess.

As the menses appear at different ages, we must not stile a person diseased because they flow not at a given time---but, if, after the common time has elapsed, there appear evident signs of indisposition, such as we have recited in their inferior degree, and less numerous, we need not hesitate in pronouncing the retention a disease.

CAUSES. A debility of the system in general, bringing on a similar state in the vessels of the womb, whence a general languid and local uterine circulation, occasioning the menses to be retained.

CURE. The indications are, to strengthen the system, and promote the action of the vessels, particularly those of the womb---and these are done chiefly by bark, tormentil root, and such like, joined with preparations of iron and bitters---the patients ought to live on a generous diet, go into the cold bath and use exercise---these will invigorate the constitution---afterwards, aloetic purges are useful---frictions of the lower extremities, and bathing the feet in warm water---indeed, all those purgatives are of service which stimulate the rectum, as aloes, rhubarb, black hellebore, and calomel; for they communicate similar effects to the vessels of the womb.

Blistering the lower part of the back, or stimulating plaisters applied there, may be advantageously recommended.

Where this debility is brought on, as it sometimes is, by continued uneasiness of mind, occasioned by disappointments, or tedious delay in love, matrimony is an efficacious remedy---some also have great faith in the electric shock; and, indeed, as a stimulant, electricity bids fair to be of great service.

THE SECOND SPECIES, or SUPPRESSION of the menses rises from a different cause, from some resistance in the extremities of the uterine vessels, originating most frequently from spasmodic constriction of those vessels, or, according to some, from a rigidity of them; the former seems to be the general cause, as it deduces its origin from cold, fear, irregular passions, fullness, or something similar, and this complaint comes on after the menstrual discharges have gone on for some time regularly; for, on their first appearance, they will sometimes stop, and not return for a year, or perhaps a longer space---but, under this circumstance,

stance, we are not to consider this as a disease, without it is attended with some morbid symptoms, such as periodic fluxes of blood from some other parts, as from the nose, eyes, ears, intestines, stomach, lungs, &c. which will sometimes occur in cases of suppression, hysteric symptoms, costiveness, frequent colic pains; for these in this species are very often concomitants.

CURE. The indications of cure here are, to take off the spasmodic constriction on the uterine vessels, which we attempt by that class of medicines called emenagogues, or promoters of the menses (183.) amongst which I consider sabine, (149, 150.) as the most certain.

However, it is often sufficient for the patient to keep quiet---avoid cold, and irregularities of diet---go into the warm bath, or sit up in a half bath, or let steams of warm water be directed to the womb---or warm fomentations may be applied on the lower part of the abdomen, round the hips, and the tops of the thighs.

But we must observe, that these applications are only to be had recourse to at the time when we expect nature would have made her efforts in a healthful state---and in some cases the patient will feel some symptoms similar to what usually manifest themselves before the coming on of the menstrual discharge at each period---it is then we should attempt to assist her, as most likely to be successful---but should the disease not yield to these applications, the remedies advised in retention of the menses, (503.) may be tried, particularly aloetic purges, electricity, and antispasmodics---though here we should be cautious in the use of tonic remedies and cold bathing---we should rather depend upon such as were more relaxing.

This complaint is very often brought on by other diseases of the constitution, and then is only symptomatic, to cure which we must advert to the cause, of whatever nature it is, and apply our remedies accordingly.

THE THIRD SPECIES, or painful menstruation, generally affects the whole system sympathetically, and the parts which lie contiguous to the womb, producing pains in the loins, hips, and down the thighs---wandering pains of the lower part of the abdomen, of the head---occasioning also pain at the stomach---giddiness of the head, frequently sickness and retchings, a number of hysteric symptoms, and sometimes epidemic fits---and other nervous symptoms, notwithstanding the menses continue to flow for some time.

This disease chiefly affects viragos, who are of full habits, and those who are lascivious, and is supposed to deduce its origin partly from the weaker action of the vessels of the womb; and, per-

perhaps, more particularly from some spasmodic affections of the extreme vessels of that organ.

CURE. Preguancy, for the most part, performs a radical cure ; but the symptoms may be alleviated by what has been recommended in a suppression, (504.) made use of some days before the coming on of the menses---to which are recommended drinking every night before bed time, and in smaller quantities through the day, of any mild watery drink, a little warm, as Balm tea, thin gruel, barley water, or such like, or slight infusions of mint or pennyroyal--frequent lying in an horizontal posture--or giving occasionally a spoonful of oil mixed with twenty drops of tincture of opium ; or opiates, where oil is disagreeable, by themselves.

§ 5. THE HYSTERIC DISEASE, CALLED HYSTERIA,

from the Greek *hysteros*, uterus, the womb, because the ancients imagined it to be, a complaint proceeding from an affection of that organ--respecting the cause of this disease there have been a variety of opinions, we shall therefore proceed to the description, and from thence endeavour to point out what appears to be the most probable source.

DESCRIPTION. In this disease there are many symptoms observable which spare no part of the body ; for the head, lungs, throat, belly, and many of its contained parts, and the extremities, have different appearances manifested in them, besides more general affections of the whole machine.

With respect to the head, there is an oppressive pain, or sense of heaviness of the forehead, temples, and eyes, attended with an effusion of tears--a torpor or dullness of the senses and mind, accompanied with a disrelish of all things.

Afterwards, those who are seized with the hysteric disease have, for the most part, a very costive state of bowels, a strong propensity to make water, which they do in large quantities, and then it is clear like water---and this SYDENHAM considers as a certain symptom--they have also a suppression of breathing, and at the same time a languor of the whole body.

After this, great weight and pain are felt in the loins, and also coldness succeeds--the belly is hard and inflated--afterwards the navel is retracted, or drawn inwards towards the back, and then a certain kind of globe, or ball, is perceived to ascend from the lower part of the belly--by and by the heart begins to be affected with palpitation---and the pulse is irregular and hard, sometimes intermittent--the extremities grow cold---there is a sense of straitness in the throat, as if the patient was strangled with a rope, the face becomes pale, the breathing very difficult, the voice fails, and the beating of the arteries are scarce any longer perceptible--but so great is the stricture of the belly,

that neither any wind can be transmittèd, nor a glyster--sometimes there is a vomiting of extremely sour materials, or green bile.

In some, so great is the violence of this complaint, that the head and limbs are seized with strong convulsive motions---the trunk of the body is wreathed too and fro--and commonly the hands are clinched, and with one the patient beats violently upon the breast; sometimes though the hands continue open, others fall into a sound sleep, and lay without sense or motion, in some the face and neck are inflamed with blood, look red, and the arteries beat strongly.

Some fall into immoderate fits of laughter, or of crying, which now and then alternate with each other very quickly; and, when the voice is restored, talk incoherently, have false ideas, and whimsical imaginations, and some degree of delirium.

However, though this is the general mode of proceeding, we must not expect to meet with all these symptoms in the same person; for the fits are varied in different people, and even in the same person at different times, both with respect to the numbers of symptoms, their degrees of violence, and length of time the fit continues--but whenever it remits, and begins to be mild, which often happens in a certain period of time, then the pulse, which was before weak and languid, and scarce perceptible, becomes more vigorous and softer--heat returns into the extreme parts--the face contracted and pale in common, becomes full and more red--the noise of wind is heard through the superior parts--and rumbling sounds arise in the belly--and at last, as if waking from a profound sleep, the patients regain their voice, sense and motion, but complain of a heavy pain of the head, languor, and dullness of the whole body, legs, and feet.

Now it appears wonderful, that often in a very short time these violent symptoms, which threaten almost instant death, should intermit and cease, so that the person who the day before appeared as if dying, should now seem to enjoy perfect health.

CAUSES. From what has been above advanced, whether we advert to the nature of the symptoms themselves, the mode of attack which in some cases is sudden, the appearances of recovery, or the state of the machine immediately afterwards, we scarce can hesitate to pronounce this disease arising from strong nervous affections, owing to the great incitability (27.) of that system.

And as even those authors who attribute the cause to the womb do allow that it attacks even men, though much more rarely than women, we cannot suppose that it is to be attributed solely

to the morbid affections of the womb, though this may be one of the principal sources in the more delicate sex--we therefore conclude, that the constitutions subject to this malady have, for the predisposing cause, great incitability of the nervous system, either from their birth, or created by some accidental circumstances occasioned in the habit from other diseases, indiscretion, or something of this nature; and that, as it is united with a greater or less degree of vascular irritability, (27.) in the whole, or some peculiar part of the constitution, so will the effect be different in different constitutions, or in the same constitutions at different periods—and as the brain has a general communication and connection with every active part of the body, however minute, by means of the spinal marrow and nerves; and as it does act, and can be acted upon, so as to produce general affections either from itself, or from other parts which are primarily affected—and as its connection with the viscera is extremely great, particularly with the stomach, bowels, womb, and genitals—and it is also liable to have its powers exerted by mental affections, we conclude, that the hysteric disease may be occasioned by primary affections of the brain, and different causes existing in different parts, and have a variety of its symptoms dependent upon sympathy. (57.)

We would therefore say, that the hysteric disease is a nervous affection, arising from too great incitability of that system, attended with different degrees of irritability of the vascular system and muscular fibres, occasioned by some things inherent in the viscera, or genitals, or from strong mental action, having for its

CHARACTERISTIC SIGNS, a rumbling noise in the abdomen—a sense of a globe or ball rolling about there, ascending to the stomach and superior parts of the throat, and producing an affection imitative of strangulation—profound sleep, convulsions, a profuse and copious discharge of limpid urine—and the mind not spontaneously various and mutable.

This complaint is liable to be brought on by various causes--from a retention or copious flux of the menses—from too great evacuations, whether by bleeding, vomiting, purging, or abstinence—from the whites being considerable, or of too long standing--from the neglect of accustomary evacuations--sedentary life, obstructed viscera, from viscid, acid, flatulent diet--from defect of the stomach--from too great salaciousness, or from too strong and painful mental affections.

CURE. The indications of which consist in taking off the convulsive and spasmodic affections, and allaying the incitability

lity and irritability of the nervous system and muscular fibres.

In order to mitigate the violence of the fit, fœtid and volatile substances should be applied to the nose, such as tincture of asa-fœtida, spirit of hartshorn--æther also is serviceable, and rubbing the temples and nostrils with vinegar--the smoke of burning feathers applied to the nose is esteemed an efficacious remedy; for by these means women oppressed with deep sleep, and lying as if apparently dying, have recovered, and soon returned to themselves.

In women with child being thus seized, a compression made with a roller at the lower part of the belly has afforded speedy relief--and as patients subject to this disease are apt to be costive, glysters made of rue, wormwood, or chamomile flowers in decoction, in which is dissolved a spoonful of salt, should be given; or if there is a difficulty in passing, pure expressed oil may be administered in the same mode.

During the fit, or on its near approach, or in the intervals, antispasmodics may be had recourse to, a variety of which have been recommended by different authors, as *valerian*, *castor*, *camphor*, *spirit of vitriolic æther*, *asa-fœtida*, *musk*, *animal oil*, (149, 150.) and *opium*, (152.) these may be given in different forms, agreeable to the wish, or the particular state of the patient, in which they are to be administered--in the fit liquid forms are only admissible—and here I must observe, that where the fœtids have been inefficacious, I have found the odoriferous answer—of the strong smelling fœtids, I give asa-fœtida, (No. 68. 181.) with the valerian julep, (No. 32, 33.) or camphor, (No. 69.) of the sweets, I prefer musk, (No. 31. with 32. 34.) but of these, according to the exigencies of the case, so do I proportion the dose.

But as opium is considered one of the most powerful antispasmodics in many diseases, and acts by exerting its sedative power, it must be observed, that when the disease depends upon the fullness of the habit, and requires bleeding, opium is likely to be pernicious, by promoting accumulation in the system, and weakening the circulatory power of the vessels—but where there is no fullness or inflammatory state, and the disease seems to depend on irritation and increased incitability, perhaps it may be the most effectual remedy.

Notwithstanding this opinion is supported by very great authority, I cannot avoid giving, in many cases, musk the preference, particularly if there is any torpor in the vascular system or muscular fibres, which we shall explain more fully when we speak on the hypochondriac disease; but then it should be ad-
mini-

ministered in tolerable large doses, from ten grains to half a dram and upwards—moderate frictions about the pit of the stomach, and on the feet, are beneficial.

SYDENHAM, who has paid great attention to this disorder, says, that it comprehends two thirds of the chronic affections afflicting mankind, advises *bleeding* and *purging*—and this he speaks of generally; here I must beg leave to dissent; for without the constitution is loaded with blood too much, they do infinite disservice---there are few who can stand either the one or the other without manifest signs of an increase in their disorder; hence, when either are necessary, except in cases where the fullness of the vessels is very considerable, cupping and mild aperients are preferable; and, if required, they may be repeated, but with the greatest circumspection; for bleeding and purging in any other mode empties the vessels suddenly, and too copiously, weakens the system too powerfully, and universally aggravates the symptoms.

Indeed, some hysteric patients cannot bear the mildest purgatives, not even glysters, without experiencing great inconveniences, having their spirits immediately depressed upon any common evacuations downwards. I have often seen hysteric fits succeed after two or three loose stools.

After the fit is got over, we must next endeavour to prevent its return, by alleviating the incitability of the system, and this is done by giving strength and firmness to the constitution, as in other nervous cases, for which many remedies have been advised, as *mistletoe of the oak, leaves of the orange tree, Peruvian bark, bitters, with preparations of iron, arsenic, mercury, and ammoniacal copper*; of the three latter I cannot say any thing in this disease, but in very obstinate cases a trial of them has been recommended—of the two first, they appear not so effectual as the bark, bitters, and iron—of several which we have here set down; see the account. (400.)

With respect to the bark, a scruple or two taken night and morning has been said to produce considerable benefit; where habits were delicate and relaxed, without any fullness and inflammatory tendency, and free from visceral obstructions, perhaps it may---but under these particular circumstances I consider it detrimental, which conclusion I draw from experience.

Preparations of iron united with bitters I have generally found most effectual---the effects of the former, and its most eligible preparations, are pointed out, (p. 228.) and the different formulæ of steel and bitters may be found, (p. 239.) and to the draught, (No. 63.) it is useful to add about thirty drops

drops of spirits of vitriolic æther—the body should be kept open by moderate doses of some aloetic pill—but in all cases it is necessary to take care that there is no sanguinary fullness or inflammatory tendency in the habit.

Where the constitution appears to be of that nature, the fullness should be kept under by moderate living, gentle exercise, particularly on horseback---and, as having too often recourse to bleeding is apt to occasion an increase of blood afterwards, in order to keep the solids and fluids in a healthful state, with respect to their influence one upon the other, setons or issues are proper.

It is also necessary to attend to the alleviation of the patient's mind, advising change of scene, cheerful company, and the avoidance of such things as raise sudden commotion of the spirits, or depression---a clear country is highly beneficial, and all such things as assist in keeping up the proper tone of the system.

§ 6. HYPOCHONDRIAC DISEASE—HYPOCHONDRIASIS,

from the Greek *upo*, sub, under, and *kartilago*, cartilage, from producing its effects, and exercising its violence under the cartilage called ensiformis, (39.) chiefly, and also under the lower rib of each side the chest, called hypochondres.

DESCRIPTION. As in the hysteric, so in the hypochondriac disease *there is no part of the body, no function, which may not be injured in this of long continuance, and be esteemed præternatural*, and the symptoms so violent and so numerous, that the whole scarce comes within the power of description---hence, as fever is a disease which may be considered amongst the acute cases the most universal, *so amongst the chronic may be the hypochondriasis.*

In the beginning, a violent tension of the stomach and bowels are perceived, and flatulent inflations under the short, or spurious ribs, particularly on the left side; there are also nausea; loathing of food---and an uncertain appetite, sometimes totally gone, sometimes voracious—the food taken is digested with difficulty---sour and viscid crudities are generated; an oppressive weight and pain in the stomach particularly succeeding eating; *spasmodic constriction of the throat, with frequent rejection of a clear mucus from the mouth*; difficulty of swallowing; heat of the stomach; sour belchings; frequent efforts to vomit, and sometimes vomiting itself, wherein materials so acrid are rejected, that the teeth have had a kind of superfactive sensation, vulgarly called “*setting on edge*,” and with which cloths have
been

been not unfrequently corroded ; indeed, vomiting of fatty materials have been observed ; besides, in the tract of the intestines, acute, pricking, or sharply darting pains are perceived about the navel ; sometimes the bowels are very lax, sometimes most obstinately costive, with a retention of wind, which passes either upwards or downwards, and alleviates in a slight degree the other affections ; but by and by returns with greater violence ; though, on the contrary, they are oftentimes seized with frequent efforts of going to stool, and tubercles, or what are stiled in the blind piles, (400.) beset the anus, (43.) also bleeding ones sometimes succeed---sometimes the patients make water with difficulty and pain---the urine itself thin, dilute, and pale, sometimes with a large sediment, and that gritty.

Nor is the belly the only part experiencing severe distress, others also suffer by consent or sympathy, (57.)---the head is much affected, in whose external parts, those called CEPHALALGIA HEMICRANIA, (346.) and various dragging pains, joined with immobility, are perceived, and that known amongst medical men by the name of CLAVUS, from *clavus*, a nail, a fixed pain, not exceeding the breadth of one's thumb—in the interior, giddiness—ringing of the ears—with a difficulty of hearing, manifest themselves—a dimness of sight ; sometimes double vision affects the patient ; the eyes become painful, with dryness ; and very often in a certain space a burning and very troublesome pain seizes the tongue---and the saliva flows so very copiously, that hypochondriacs are called SPUTATORES. (158.)

At length the animal functions begin to fail---the mind roused by no cause, at least by that which is extremely slight, to inquietude, anxieties, sorrow, anger, fear---becomes incompetent—inclines to vain and perverse imaginations---the power of memory dies away, and reason fails—sleep is disturbed, turbulent, and replete with terror---in the breast great straitness, constrictions—violent difficulty of breathing, joined sometimes with fullness of the chest—tremblings and palpitations of the heart occur.

Now, from these symptoms, it appears very obvious, that this disease is a nervous affection like the former, though we consider this to be somewhat different, and to depend more upon a torpidity of the nervous system, than too great an incitability ; and have the local incitability manifested in different parts, brought on from the continuance of the complaint.

For we must observe, in its commencement the signs of great torpor only make their appearance—besides, the disease seldom appears early in life, *and more usually in those advanced in years only,*

only, and is apt to attack those who lead indolent and sedentary lives, are much addicted to study, and deep thinking, and oppressed with those particular mental affections I have called saturnine, (79.) for these are apt to weaken and blunt the active powers of the constitution, render the circulation and nervous influence weak and sluggish—and, indeed, some medical writers have almost wholly attributed this disease to a state of mental affection. Besides, their symptoms in winter, autumn, or any cold weather, are always more violent—but, on the contrary, in warm, and in the summer season, hypochondriacs are more alert and vigorous; and in women afflicted with this disease, it is always increased at the time their menses ought to flow; for they, for the most part, labour under some defect in this point—add to this, hypochondriacs can very rarely be affected with continued, epidemic, or infectious fevers—to the plague though they are liable—still remain free from many other diseases which reign at particular times; for, from the torpid state of their nervous system, the nerves become incapable of feeling the effects of the morbid particles which get into the habit, and therefore these particles are permitted to pass through the machine without creating any disturbance—the same happens to melancholic, but not to hysteric people.

CAUSES. The *remote* or *inducing* are, besides those specified above, too long continued watching---hard drinking---irregular diet---natural predisposition---or whatever may give rise to nervous disorders in general in such constitutions.

CHARACTERISTIC SIGNS. An affection arising from too torpid a state of the nervous, and want of proper irritability of the vascular system, attended with languor, sadness, and fear from inadequate causes, affections of the bowels and stomach, and mental despondency.

CURE. Our remedies must be of two kinds, corporeal and mental; for our indications are, to remove the affections of the stomach and bowels, increase nervous incitability, and vascular irritability, and properly regulate the last, and alleviate the distress and uneasiness of the mind.

As little can be expected towards performing a radical cure, when the disease is once fixed, as it very often originates from the very formation of the constitution, and depends so much on the state of the mind, we must attend to such things as will alleviate bodily distress, so that no imperfection in any part of the machine shall contribute to increase the uneasy symptoms.

It is therefore first advisable to unload the intestines, with a glyster, or some aloetic medicine, (No. 108.) after having procured

cured two or three copious evacuations, then let the stomach be cleared with a vomit, (No. 11, 12.) either will answer the purpose, or white vitriol, (168.) if acidities prevail in the stomach, they should be corrected with alkaline salts, (191.) chalk, &c. (191.) (No 42, 43.) particularly calcined magnesia, or spirit of sal ammoniac with quicklime, as they unite with acid, without fermentation and creating any wind; and in this case accrescent vegetables, (190.) should be avoided—though leavened bread and vinegar may be taken with animal food, as the least prejudicial; for solely it could not be persisted in, without contributing to corrupt the state of the blood, (*4.) testaceous animals, or shell-fish, (177.) are proper viands with this intent—if we want to contribute to keep the body open by absorbents, the vegetable alkali, (191.) or magnesia, must be employed—if that is unnecessary, or a check is to be given to any evacuation of the bowels by these means, chalk, crabs eyes, or other similar absorbents, (191.) or the volatile alkali, (191.) must be exhibited—not any of which though must be employed in such quantities as totally to destroy the acid necessary for the composition of animal fluids for the purpose of nourishment.

In cases of costiveness, we should confine ourselves to small doses of the aloetic pill occasionally, (No. 108) such as will gently keep the body open; for these after the operation, are not apt to leave the body in a costive state—rhubarb, therefore, should be avoided, and the common saline purgatives joined with antimonials—after these things are effected, we must consider what are likely to prevent a return of the symptoms.

Should the stomach be relaxed, as is sometimes the case, though not always, we must endeavour to give it increase of power, by invigorating and strengthening applications, as the vitriolic acid, or that of sea salt—also tar water, fixed sal ammoniac, or water of acetated ammonia; these are said to stimulate the stomach, and often increase the appetite—in this disease the fixed ammoniacal salt has been of singular efficacy, by the daily use of it in doses, just what would render the bowels lax—after taking it six, eight, or twelve months, the cold bath has completed the cure—aromatics, as cinnamon, ginger, pepper, nutmegs, cloves, and other substances possessed of certain degrees of pungency; these are extremely useful, particularly if the stomach is very torpid, or much relaxed—they fit that organ for feeling the effect of tonic medicines, as well as increase its temporary action—on which account, volatile salts of hartshorn, or ammonia prepared, are well calculated, and with tonics are very properly conjoined—bitters also are very useful, as quassia wood, columbo, orange-peel, gentian, chamomile, &c. and their preparations, either in

infusion, tincture, powder, or extract--but we must not persist in the use of any of these too long, lest they should hurt the tone of the stomach by their long continuance, which they are apt to do.

Bitters and astringents united are said to have more efficacy than either separately--bark, therefore, as possessing these properties, has been highly extolled; but the same caution is here necessary, for the same reasons.

The best remedy for producing the desired purpose in this case, and what may be continued the longest with the greatest safety, is iron, and its preparations--the steel waters have been recommended, and often proved successful--but on these Dr. CULLEN makes, though a minute, a very judicious remark, and says, though in the hypochondriac disease chalybeate waters have sometimes been apparently efficacious, he imputes it more to the amusement and exercise accompanying the drinking them at the fountain head, rather than to the tonic power of the small quantity of iron they maintain---perhaps the elementary water favouring the excretions may have a share in alleviating the disease--and it is for the same reason, probably, that these people are relieved more by drinking tea and coffee than those who labour merely under indigestion, and also why the warm bath is preferred to the cold in the former case, and in the latter prohibited.

If the mind is harassed, or in pain, and flatulence, attended with head-ach, a slight opiate, joined with a cordial volatile draught, may be given, as from five to ten drops of tincture of opium, with five or six grains of salt of hartshorn, in a little peppermint water, may be given; but opiates should be very sparingly used—in spasmodic affections they may be used also in the same manner, coupled with asafoetida or musk--if the pulse should be quick, and there should be a perceptible feverishness, aromatics and steel must be omitted, and exchanged for bark and the vitriolic acid.

We should be particularly careful that the patient should be thrown into such situations, as to keep his mind in a state of cheerfulness, in order to its being drawn from those unpleasant reflections by which it is disturbed, particularly such as lead him to brood over what he considers an irremediable calamity, his ill state of health—lessons of philosophy and reason are of little use, if any, it is momentary; for the first eructation or pain, however trifling, overturns the strongest arguments that can have been advanced, and he reverts back to his usual despondency—nor can patients of this sort bear raillery, not any thing is to them so offensive, they consider it either as ignorance, or
the

the want of humanity, and will form most unconquerable dislikes to those who use it.

Cheerful company will be found always beneficial, and any exercise in the open air that requires dexterity, for these amuse the mind—as to exercise, riding on horseback, or driving a carriage, is the most eligible; but, if it can be afforded, taking a long journey, or going from one watery place to another, claims the preference; for variety of objects are perpetually engaging the attention, few of settled disgust are presenting themselves; and constant exercise employs a good deal of his time, and steals him as it were from himself; and by these means he will lead at least a life of comfortable satisfaction, fancying the whole good he has derived from change of air, which will encourage him in the pursuit; in fine, whatever is directed to him should be capable of furnishing amusement, and never carried to excess; for fatigue of every sort is extremely detrimental—his diet should be light, fit easy on the stomach, agreeable to the palate, cordial, nourishing, and easy of digestion---animal food is in general the most proper--and his drink should be spirits, which he likes best, lowered with water.

I have, in the course of practice, met with some cases extremely perplexing, where symptoms declaratory of both hyteric and hypochondriac affections manifested themselves---hence I have ventured to call it the

§ 7. HYSTERIA-HYPPOCHONDRIAC DISEASE,

as participating both of one and the other, which, as it has occurred to me, I shall take the liberty to describe.

DESCRIPTION. In this complaint patients chiefly complain of heavy, uneasy pains in the head, sometimes fugitive and acute—a dimness of sight; but this temporary, a sense of strangulation, ringing in the ears, and quickness of hearing---sudden starting at any slight noise, on the opening of a door quickly, or any thing falling in the room—sometimes they have complained of a coldness of the head, particularly the back part, as if water was trickling down it—flatulence of the stomach and bowels--sometimes they are costive, now and then otherwise---urine is made frequently, in small quantity, then becomes turbid; at other times more copious, and of an amber colour, seldom or never purely limpid---they oftentimes complain of an itching, tingling, or pricking in the skin, especially if a gentle sweat is promoted---sometimes an eruption like the nettle-rash shews itself--frequently a general tumefaction, of a puffy aspect, without any spots--at others very small vesicular eruptions at the

tips

tips of the fingers; and all these external appearances are, for the most part, attended with great heat, itching, or a sense of pricking--the appetite is very irregular--the mind easily disturbed, and generally brooding over some personal calamity, chiefly imaginary--the circulation sluggish and languid--the pulse slow--and the extremities, for the most part, cold.

CAUSES. These appearances I always suspect from some acrimony subsisting in the fluids, and thus far practice has confirmed my opinion, enabled me to reason on these appearances, and reconcile them to the doctrines laid down.

For the incitability of the nervous system seems to have been kept by the stimulus of the acrimonious humours, which was not sufficiently powerful to increase properly the action of the vascular system--hence the internal parts would be loaded, and the acrid particles have a power of exerting their stimulus in proportion to the quantity retained--besides, from the torpid state of the circulation, the acrimony would be greatly increased by the retention of such materials as should naturally have been thrown out of the habit, and thus I am warranted to assert from what occurred on any eruption appearing on the skin, or hot tumefaction of the extremities, or by gentle sweat being promoted; for at that time the patients were more considerably relieved.

CHARACTERISTIC SIGNS. Quick nervous incitability, united with strong mental prepossession, and persuasion, of the patient's own misery, and fatality of their situation, with torpor of the vascular system.

CURE. The indications are, to render the nervous influence more equable, and take off the vascular torpidity; and these are chiefly accomplished by cordials, aromatics, and *stimulating* antispasmodics, by promoting a determination of the fluids to the surface.

But, notwithstanding gentle perspiration is not singularly useful for this purpose antimonials must not be exhibited, nor must opiates for alleviating spasmodic affections, for they very often do infinite mischief, by relaxing the stomach, and increasing the torpor of the system--stimulants are better, and still more the stimulating antispasmodics; such as volatile alkali, asafoetida, musk, given occasionally, and the volatile saline mixture intermediately, joined with cordials, instead of the Polychrest salt, (No. 126.)--(of these see the different formulæ, from page 231 to 235.)--and I have often found the spirit of vitriolic ether and camphor answer every good purpose we could expect from opium, without producing its disagreeable consequences--the warm bath in these cases is beneficial.

Though

Though it is necessary to have the body kept open, strong purging always does harm—occasionally the aloetic pill, (No. 108.) with or without the calomel, may be given—and as for bleeding, we should rarely, if ever, have recourse to it—if it is ever thought necessary, cupping is the best mode—perhaps topical bleeding with leeches may now and then be useful in fixed local complaints of the head, or other parts where severe pain gives much uneasiness; but, in order to keep off an increase of blood, I should recommend setons or issues—riding on horseback, and that *constantly persevered in*, is amongst the most certain remedies---and bitters, with preparations of iron, or in some cases without them, generally must close the cure---the Bath waters are extremely useful---and, when patients have recovered strength to bear the cold bath, that may be had recourse to; but care must be taken to proportion the coldness of the water to the power of the constitution, for baths too cold are highly injurious---indeed in our medical conduct great nicety is required in these complicated cases, in which we must observe, that the remedies recommended in the hysteric and hypochondriac disease must be selected, as the complaint verges more to one than the other---upon the whole, I found antispasmodics and stimulants to be the most efficacious auxiliaries; the former when hysteric, the latter when hypochondriac symptoms were the most predominant; in which last they may be freely used; for it is astonishing in how large doses stimulants may be given without injury, and how very necessary they are to produce any good effect.

§ 8. INDIGESTION, CALLED DYSPEPSIA,

from the Greek words *dys*, difficulter, and *pepsis*, concoctio, digestion---If we consider what has been said of the stomach, and its nature, (30, &c.) it will obviously appear, that it is liable to a variety of complaints, such as inflammation, abscess, ulcer, scirrhus of the lower orifice of the stomach, and a variety of others---indigestion is then said only to be considered as a symptom---indeed, it may always properly be considered in this light; for where there is a defect in any of the digestive powers, (see page 72.) this complaint occurs---and if we consider what has been advanced, when speaking of pains of the stomach, the hysteric, and hypochondriac disease, we may form a tolerable certain opinion of its cause, which generally proceeds from a WEAKNESS AND RELAXATION OF THE STOMACH AND BOWELS, and which cause we must consider in this place.

DESCRIP-

DESCRIPTION. Under this circumstance, there is a want of appetite---nausea---vomiting flatulent distension of the stomach, with eructations either sour, rancid, or some other, agreeable to the nature of the imperfectly digested, or indigestible materials contained in the stomach---cardialgia, or heart-burn, (352.)---pain also in the stomach, attended, for the most part, with a costive habit---this disease will also very often produce the sick head-ach, as proved by experience. Dr. FOTHERGILL says, "from numerous circumstances it is most clear, that this head-ach proceeds from the stomach, not the reverse, as has been the opinion of those who have been sufferers by it."

CAUSES. The *remote* or *inducing* are, too frequent overloading the stomach---living upon leguminous and flatulent diet---sedentary life---too violent evacuations, particularly of blood---taking too frequently strong purging medicines; dysentery; miscarriages; intermittents; and spasmodic affections of the stomach and bowels. The *proximate* or *immediate* have been specified above.

CURE. The indications are, to invigorate the tone of the stomach, and, where wanting, to increase the heat—the mode of doing which have, in a great measure, been set down when treating of pain of the stomach from indigestion, (352, &c.) and the hypochondriac disease, (512 &c.) to which we shall only beg leave to add, that cold liquids should be drank in preference to those which are warm, without actual warmth is necessary on account of the too great coldness of the stomach, and then, instead of tea and coffee, infusion of rose leaves, sage, rosemary, or mint, may be used---and the preference should be given to the cold bath.

If meat cannot be contained on the stomach, as will sometimes be the case, cupping-glasses may be applied about two inches below the stomach, stimulating cataplasms, or plaisters, applied at the pit of the stomach—generous, rough wine should be drank cold.

The mode of living should be carefully attended to, else all means will prove ineffectual—all oily substances, butter, therefore, fat meats, and meat pies, all unfermented farinaceous food, malt liquors, particularly ale and porter, watery and vapid fruits, and raw vegetables, should be avoided—chewing tobacco, or any thing which promotes too much the discharge of saliva—frequent inebriation are extremely pernicious, as also excess of venery, indolence, mental uneasiness, or too close application to intense study or business---nor should any excess be committed in eating, though the food should be of the easily digestible kind,

kind, of which to the animal class patients should chiefly adhere—cold, moist air, without exercise, is detrimental; but cold air with it is beneficial—food should be often taken, and in small quantities; but if patients will not adhere to this rule, they should be confined to one kind for several days; and if vegetables must be indulged in, those which are the most tender, and stewed in their own juices, are the most proper.

If we now consider the effects produced in the habit by this complaint, we shall see that a vast variety of chronic diseases owe to it their origin, and, therefore, on its very first appearance it should be carefully attended to; for, if it is suffered to continue long, it is very rarely radically cured—and, indeed, I am persuaded that a great number of those complaints which affect children born of healthful parents, in their infantile state, are produced from the same source, occasioned too often by the indulgence of over-sond mothers, or the ignorance or indolence of nurses, all which I think may be prevented by adhering to the rules laid down when treating of nursing. With regard to their cure, similar modes must be pursued as we have laid down in the disease just treated, appropriating the remedies to the circumstances of the case, and the delicacy of the frames with which we have to deal.

§ 9. RICKETS—RACHITIS.

This English name seems to be a corruption of the word *RACHITIS*, probably from a supposition that this complaint derived its origin from some affection of the spine, as the Greek word *raxis*, from whence *rachitis* is derived, means spine.

Most physicians agree that it very seldom, or never, attacks before the ninth month after birth, and seldom comes on after two, some say six, years.

DESCRIPTION. In the beginning, the proportion of many parts of the body is irregular--the skin loose, the belly thin, and as if turgid with wind--the muscular flesh wastes away, but the hands, wrists, arms, knees, and feet grow large--the bones afford but weak support to the belly, and are often accompanied with crookedness of the spine, from whence all their bodily actions and mode of moving on the ground are weak, which often terminates in weakness, unwillingness, and dislike of motion--these children sit sluggishly in the arms of their nurses, and feel heavy--at that time the arteries running up the neck appear full--the head is large, and nods from one side to the other, owing to the incapability of the neck sustaining it erect, from the flaccidity of that part their dispositions are acute beyond their

their age, but the breast is narrow, and, as it were, compressed from its sides with the sternum acuminate, and the extremities of the ribs knotty.

As the malady increases, a slow fever comes on, with a cough, difficulty of breathing, and other symptoms, which, for the most part, continue till death closes the scene---but this is not always the case---a number of these symptoms we have had instances of continuing for a long series of time, still afterwards the disease ceases to advance, and health is restored, except some distortions of the limbs may remain. We should have observed, that the opening at the top of the head, called fontanelle, and the parts where the bones join, named sutures keep longer open, and in a greater degree, than others in an healthful state; and the forehead is apt to protuberate in an uncommon manner---the children get their teeth slower, and much later than usual, and those which appear soon become black, grow loose, and often fall out---the desire for food, and the appetite itself, is often quick and good; but there is frequently a looseness, or a strong propensity to it---and though sometimes the disposition is acute, we have said, now and then the faculties of the mind are impaired, and dullness and stupidity are prevalent.

These symptoms do not all of them prevail in every patient, but more or less of them according to the degrees of mildness or violence of the disease; in some those which are more moderate, in others those which are more severe, make their appearance.

On opening those who have died of this complaint, in some the liver has been preternaturally large, scirrhous, and adhering to the midriff---the mesentery beset with indurated glands, and obstructed with the sweatbread---in others, the lungs united to the pleura, or back, and they either livid, or loaded with abscesses, called vomicae---in some the pericardium, the membrane surrounding the heart, surcharged with serum---but in common the brain has been found flaccid, replete in its ventricles with a thin watery fluid, and the fluids themselves through the machine in a dissolved state; the muscular parts preternaturally soft and tender, and the bones capable of being cut with a knife, particularly near the places of their union.

CAUSES. The *remote* or *inducing* are, bad nursing---suckling children too long---an acid produced from the milk with which the child is fed for the first nine months, or feeding it on unfermented ferinaceous substances, and indulging too much in their use, particularly such aliments as possess too firm a texture, are too viscid and four, as bread not well fermented, cheese, cheese-

cheese-cakes, garden fruits---giving children four wine---living in bad air, or low marshy places---opiates too frequently and freely given---want of proper exercise---the habit weakened by preceding diseases---a diseased nurse---and external violence.

The *proximate* or *immediate*, a torpid state of the circulatory system, and general flaccidity or relaxation of the solids preternaturally increased, by which the organs of digestion, assimilation, and nutrition, are defective in their power, and bring on a thin state of fluids, and want of that matter in them which form the bones called ossific.

CHARACTERISTIC SIGNS. A large head, swelling greatly on the fore part---tumesied knees and wrists, depressed ribs, distended belly, the rest of the body wasting away.

CURE. The indications are, to increase the tone of the stomach, improve the digestive powers, and invigorate the system.

In the first place, however, some of the symptoms are to be alleviated, as the stomach and bowels are apt to be foul, at the same time the latter distended with wind; they should be emptied by gentle vomits and mild purgatives---small doses of ipecacuanha, or of tartarized antimony, should be given for the first intent; and for the other, rhubarb and calomel, or Polychrest salt; rhubarb is the most eligible, as it is both bitter and astringent, therefore a good stimulant and tonic---the vomit may now and then be repeated, as it will, by the shocks it gives to the bowels and the other viscera of the belly, assist in taking off, or preventing the obstruction and enlargement that often occur in them.

The belly also may be rubbed with stimulant liniments, as volatile liniment, or No. 182. which has been strongly recommended---indeed, any of the joints which are swelled may be rubbed with this twice a day--and, perhaps, it will be more efficacious if it is applied after friction of the parts with a flannel before the fire---*scate oil* has also for this purpose been much extolled, which is used by the inhabitants of the western parts of Scotland in the following manner:---first, the wrists and ankles are rubbed well with oil in the evening, this immediately raises febrile affections for several hours; when the fever subsides, the same parts are rubbed again the night following, and repeated as long as the rubbing excites similar effects--when, by rubbing these parts alone, not any febrile affections can be excited, the same process is performed, and continued in the same manner on the knees and elbows--then afterwards down the back bones, and on the sides--and when no fever is raised by this operation, a flannel shirt dipped into the oil is put upon the patient's body,

by which more violent febrile affections are raised than any of the former unctions, and is continued till the cure is completed, which commonly happens in a short time.

The chief tonics employed in these cases are bark and steel--of the former, from the nauseousness of the taste, it is scarce possible to get down a sufficient quantity to render it effectual--however, it may be applied externally to the wrists, by forming the extract into plaister, or quilting the powder in soft linen, (260.) applied in these modes I have been informed that it has proved effectual; but I should prefer its being brought into contact with the coats of the stomach immediately, as on that, it appears to me, depends its greatest efficacy.

Steel, as a preventive, has had its warm advocates, who, in order to be able to distinguish whether a child will become rickety, point out the following symptoms :-a paleness and swelling of the countenance, and in that part of the cheeks, which should be naturally red, a yellow colour approaching to that of sulphur; in which case, five grains of the filings of iron, and as much rhubarb, with ten grains of sugar, should be given every morning fasting and evening--but should this prove too purgative at first, one dose should only be given every day---after a month's continuance, a keen appetite ensues, quick digestion, and a copious flow of urine--the fullness of the face, and yellowness of the complexion, by degrees are removed, and natural countenance and firmness of the body gradually restored--and this practice, it is said, has never failed of success in any one instance.

Five grains of ammoniacal iron may be given twice a day for a month, or longer, interposing occasionally aperient doses of rhubarb; but, in cases of feverish disposition, bark, with the vitriolic acid, is more eligible.

In cases of rickets, prepared kali, (177.) half a dram dissolved in eight ounces of bark decoction, four ounces taken every day cured a boy of seven years old, who has so much afflicted, that his inferior extremities had become stiff and immoveable--the body flaccid, he was much worn away by a looseness and constant sweatings, and had five fistulous ulcers all discharging at the same time--in the course of one month from beginning to take the medicines, he rose from his bed, and walked with some support--the bark was then changed to madder, and in less than four months he walked with a crutch, and by that time the ulcers were nearly healed--the watery solutions of kali have in many rickety people been successful.

Strong beer, porter, and wine have been recommended; but I should rather think them pernicious, the two former from
their

their visciditv, and the latter from its proneness to become acid.

But the remedy most to be depended upon is *cold bathing*, or *bathing in the sea*, and is certainly the most powerful preventive. In Scotland it has long been the practice with people of all ranks to wash their children from the time of their birth with cold water; and, from the time that they are a month old, the superior class dip them entirely in cold water every morning--and, where this practice has been pursued, Dr. CULLEN asserts, that he never met with any instance of rickets—among the common people, though they wash their children with cold water, they do not so commonly practise immersion; and when amongst these he meets with cases of rickets, he prescribes cold bathing, which has accordingly checked the progress of the disease, and seems sometimes entirely to have cured it.

With respect to diet, strong objections have by some been started to milk, and where nurses are apt to give large quantities of a thin watery kind, it may certainly be detrimental, because it will weaken and relax the stomach, fill it and the bowels with four humours, and also the machine with too great a load of watery, ill-digested fluids, and hence favour the coming on of the rickets; but where the milk is of proper consistence, and does not appear to disagree, it may be persisted in—chicken or thin veal broth, beef-tea with rice, or rice with cow's milk, properly thinned, may be occasionally given—and leavened bread is preferable to the unfermented farinaceous substances, of which thin panada may be made, and now and then mixed with small portions of aromatic species.

Testaceous powders, crabs eyes, &c. (191.) may be given by themselves, or mixed with the food, as they are tasteless; for of these we have accounts of their utility.

Exercise in these cases is essentially necessary; but it should be of the gentler sort, and in an horizontal position, lest, by being kept upright, some distortion should take place—here cradles may be of use, or mattresses laid upon swings, and judiciously contrived to secure the little infant from falling out, which should be fixed in the open air, in some shady place, protected from the too powerful force of the sun—nurses should avoid carrying children in this disease always in one arm, (126.) nor should they hoist, or toss them up much, for the breast may by these means be greatly injured, by the pressure of the thumb and finger on each side the breast bone, from indentation or bending of the ribs inwards.

And with respect to situation, as it has been observed, that people who live in damp moist places, where the air in common

abounds too much with watery particles, are more subject to this disease than those who live in dry airy situations, particularly in Holland, all such should be particularly avoided—and by observing the rules here laid down, we may be almost always successful in preventing, and very often in curing this malady, if at the same time care is taken to preserve cleanliness, which is not the least useful rule in our conduct.

§ 10. HYDROPHOBIA;

so called from *udor*, aqua, water, and *phobeo*, timeo, to fear, or DREAD OF WATER—this is by no means a proper appellation—the term of Dr. MEAD is more characteristic, *DUSCATAPODIA*, from *dys*, difficulter, difficulty, and *katapino*, deglutio, to swallow, a DIFFICULTY OF SWALLOWING; for it has been observed, that dogs, wolves, and foxes, in which animals this malady arises spontaneously, have, though they have been mad, lapped water, eat, swam over rivers, and run along the banks—however, as an incredible aversion to all liquids is *in general* the leading symptom, it has retained the former name—indeed, in men who have been bit by dogs or wolves afflicted with this malady, the principal symptom is an aversion not only to water, but also air and light, and they extremely rarely have any desire of drinking. It has been differently divided by different authors—the best of which appear to be into that which arises from the bite of a mad animal, called therefore *Hydrophobia rabida*, and that which comes on from some undiscoverable or imperceptible source, styled *spontanea*.

DESCRIPTION. It generally first discovers itself by the patient's becoming languid, dull, and restless, and having frightful dreams—suddenly the pains, for the most part, shoot from the place where the skin was lacerated, all along up to the throat, where it causes a sensation of suffocation, and a total inability of swallowing liquids---though there is not always a dread of them attendant, yet there have been instances where the noise of falling water could not be borne, it created such violent agitation, much less the sight.

These spasmodic affections of the throat, in the course of the disease, gradually diffuse themselves over the whole muscular system, similar to what happens in tetanus, (415.)—nor is it uncommon to observe, in strong constitutions, a priapism, or even a lustful appetite, exerting itself with some degree of violence—should the wound have been healed, it begins to be affected with pain, swells, inflames, and discharges a thin, sharp fluid

fluid—this pain is considered a primary invariable mark of a beginning hydrophobia.

CAUSE of the first species, with which we oftenest meet, is the virus of the mad animal absorbed into the habit affecting immediately the nervous system—which virus may lurk inactive in the constitution for fourteen, twenty-one or forty days, within which time it begins to exert its influence; and it is observed to do that the sooner, in proportion as the bite is nearer to the glands, (24.) of the upper part of the throat and mouth, called salival.

CURE. The indications are, to endeavour to take off the spasmodic symptoms, as in tetanus, (415.) and throw the offending poison out of the habit.

For which purposes we apply and depend upon large doses of opium given every three or four hours—musk also may be given liberally—plasters of opium applied to the throat, and linaments of tincture of opium and camphor—sponges dipt in hot vinegar should be put to the mouth and nostrils, that the fauces may be kept perpetually moistened by its steams,—nor should the use of the warm bath be omitted.

Towards the close of the cure, opium may be advantageously joined with cinnibar, musk, camphor, and asafœtida—opiate glysters should frequently be thrown into the intestines; in fine, it should be applied to every place, and by every means, as expeditiously as possible, in hopes of allaying the violence of that highly increased degree of nervous incitability and muscular sensation—and, in order to procure an expulsion of the poison out of the habit, mercurial ointment rubbed into the machine, that a salivation may be raised as soon as possible, and this continued for two or three weeks.

OIL has lately been recommended in this complaint, thrown into the habit by means of external frictions all over the body, thrown into the intestines by way of glyster, and given by the mouth, when patients can be prevailed upon to conform to the mode—One case has lately occurred, where there was every reason to conclude that the patient was preserved by this method—sea and cold bathing, with the pulvis antilyssus, (101.) have been greatly recommended in this disease, which have proved insufficient.

Indeed, cold bathing appears to me, if not a dangerous, a doubtful experiment, and depends upon constitutional circumstances solely for its utility, if it has any; for without perspiration can be increased by its use, it certainly bids fair to confirm, rather than remove, the malady, by forcing the fluids too much upon the internal parts of the system, in which case, should

should the habit not be strong enough to exert an expulsive force more than adequate to the impulsive power, the poison would be more riveted on the nervous system, and humours and sanguinary congestions be added to the nervous affections—indeed, CELSUS himself seems to have been aware of this, or some other inconvenience, arising from the use of the cold bath; for he advises, as soon as the patient comes out, to be plunged into warm oil, and drink of generous wine, evidently to solicit and increase the motion of the fluids towards the external parts—in these cases, therefore, the warm bath and frictions appear to be the most proper auxiliaries to the other remedies.

This disease is sometimes succeeded by inflammatory symptoms, in which case we may have recourse to bleeding.

After patients have gone through the proper course of the remedies herein advised, sufficient to remove the cause, then cold or sea bathing, adapted to the powers of the constitution, with the use of tonics and stimulants, may doubtless have its use, in order to give strength and vigour to the system, necessarily debilitated by evacnants and sedatives.

The second species arises without any contagion being communicated, in some fevers—from some preceding diseases—from the accession of an epilepsy—from the bite of an epileptic patient—by the bite from people in violent fits of rage, &c. according to the accounts of different authors—indeed an inferior degree of it will be observable in some hysteric cases, where, from the difficulty of swallowing, patients are extremely fearful of taking liquids, nay, they cannot sometimes be prevailed upon to make the attempt.

In all which cases musk and opium appear to be the remedies, most rational, and productive of the greatest efficacy.

When it arises from the bite of a mad animal, the preventive method laid down, (102.) should be strictly observed, which appears to be the best calculated to obviate the most dangerous, and too often fatal effects of this destructive malady—and with **CHARACTERISTIC SIGNS** of which it may be useful to close the account; these are, a very high degree of nervous irritability, or super-sensation, attended with a loathing, or dread of any liquid, from the difficulty of swallowing, creating a painful spasmodic affection of the throat, for the most part occasioned by the bite of a mad animal, and sometimes, though less frequently, from other accidental or inherent causes.

FORMS OF MEDICINE.

No. 140. CINNABAR ELECTUARY.

Take Bark,
 Valerian in powder,
 Cinnabar of Antimony,
 Syrup of Saffron, sufficient to form an electuary.

} of each 1 ounce,
 $\frac{1}{2}$ an ounce,

Dose. Two drams.

141. AMMONIACAL MIXTURE.

Take of Milk of Ammoniacum, 3 ounces;
 Pennyroyal water, 6 ounces.
 Antimonial Wine, 40 drops.
 Oxymel of Squills, $\frac{1}{2}$ an ounce.
 Compound Spirit of Lavender, 3 drams.

Mix.---Dose. One ounce or one ounce and a half.

142. STIMULANT APERIENT PILLS.

Take Extract of Bitter apple
 Aloes,
 Flowers of Benzamin,
 Salt of Amber,
 Myrrh,
 Castor,
 Calomel prepared,
 Camphor,
 Salt of Hartshorn,
 Balsam of Peru, sufficient to form Pills.

} of each 20 grains;
 } of each 30 grains.
 } of each 10 grains

Dose. One dram.

143. AMMONIACAL MIXTURE.

Take Acetated Ammonia, 2 ounces.
 Peppermint Water, 5 ounces.
 In which dissolve
 Gum Ammoniacum, 1 dram.
 then add Simple Oxymel 6 drams
 Mix.—

No. 144. STIMULATING TONIC MIXTURE.

Take Decoction of Bark, $1\frac{1}{2}$ ounce.
 Camphorated Tincture of Opium, $\frac{1}{2}$ an ounce,
 Tincture of Spanish Flies, 1 dram.

Mix.---

No. 145.

No. 145. FOETID ATTENUANT MIXTURE.

Take Gum ammoniac,	} of each 1 dram.	
Asafoetida,		
Pennyroyal Water,		7 ounces.
Syrup of Garlic,		$\frac{1}{2}$ an ounce.

Mix.---Dose. Two or three spoonfuls.

146. PURGING MIXTURE.

Take Infusion of Senna,	6 ounces.
Tincture of Aloes,	6 drams.
-----of Jalap,	3 drams.
Aromatic Tincture,	$1\frac{1}{2}$ drams.

Dose. One ounce and a half.

147. COOLING PURGING DRAUGHT.

Take Warm Water,	1 1-2 ounce.
Acetated Kali,	1 1-2 dram.
Honey,	2 drams.

Mix.---Given two or three times a day.

or---148.

Take Common Mint Water,	1 1-2 ounce
Tartarized Kali,	3 to 4 drams.
Syrup of Roses,	1-2 an ounce.
Compound Spirit of Lavender,	1 dram.

Mix.---To be given in the morning.

149. DANDELION DRAUGHT.

Take of the Leaves, Stalks, and Roots of Dandelion, well washed and bruised.	} 1 handful.
Raisins,	

$1-2$ an ounce.

Let these be boiled in one pint to half a pint of water, let it stand till cold, then strain off the clear liquor, in two ounces of which dissolve Acetated Kali,

and add Tincture of Senna, $1-2$ a dram.

Compound Spirit of Lavender. 1 drams.

Mix.---

No. 150. SAPONACEOUS PILLS.

Take Venice Soap,	2 drams.
Rhubarb,	1 dram.
Syrup of Saffron, sufficient to form thirty-six Pills.	

Dose. Four.

151. SEROUS PURGATIVE POWDER.

Take

Take jalep in powder,
Purified Nitre, } from 20 to 30 grains.
Mix.—

or---152.

Take Gamboge,
Crystals of Tartar, } from 12 to 20 grains.
Mix.--- 1-2 a dram.

153. DIURETIC ELECTUARY.

Take of the Rust of Iron prepared, { from 2 drams to 1-2
an ounce.
Powdered Squills, 1 dram,
Aromatic Powder, 1 1-2 drams.
Conserve of Roman Wormwood, 1 1-2 ounce.
Syrup of Garlic, sufficient to form an Electuary.
DOSE. Quantity of a Nutmeg twice or thrice a day, with the
following Draught :

154. DIURETIC DRAUGHT.

Take of Diuretic Salt, from 1-2 to 1 1-2 dram.
Distilled Water, 1 1-2 ounce.
Horseradish Water, 2 drams.
Mix.---

155. DEOBSTRUENT PILLS.

Take Extract of Black Hellebore, } of each 2 drams.
Myrrh Dissolved, }
Powder of the Holy Thistle, } 10 scruples.
Mix these well together, and let the mass be exposed to the dry
air, until it is proper to form into pills, a grain and a half
into a pill. These pills have been given to the number of
twenty or thirty to a dose, dividing them into three equal
portions, one portion to be given every hour.

156. MEDICATED WINE OR BEER.

Take of Gentian. }
Lemon Peel, } of each 4 ounces.
Mint, }
Juniper Berries, }
Cinnamon, 2 ounces.
Rust of Iron, 1 ounce.

Infuse these in a Gallon of Wine, or Ale, for fourteen days.

DOSE. Of the Ale half a pint, of the wine three or four ounces.

157. STIMULATING TONIC ELECTUARY.

Take of the Root of Wake Robin, fresh }
gathered, and well bruised, } of each 1-2 an ounce.
Gum Arabic in powder, }
Bark, } 5 or 6 drams.

Syrup of Saffron, sufficient to form an Electuary.

Dose. The quantity of a Nutmeg---or the ingredients may be formed into powder or pills, and taken in that manner, properly proportioning the dose of Wake Robin in powder of the dried root, that is, from five to ten grains at a dose.

158. CAMPHORATED BOLUS.

Take of Mithridate, or	} 20 grains.
Venice Treacle,	
Camphor,	8 grains.
Syrup of Saffron, sufficient to form a bolus.	

159. DECOCTION OF WATER-DOCK.

Take of the Bark of the Root of Water-Dock,	} 1-2 a pound.

Boil this in six pints of river or rain water to four, in which dissolve two drams of Crystals of Tartar, and let half a pint be taken three or four times a day.

160. KALI DRAUGHT.

Take of Kali prepared,	15 grains.
Distilled Water,	1 1-2 ounce.
Syrup of Sugar,	1 dram.

Let this be drank, and immediately afterwards let dilute vitriolic Acid, as much as will neutralize the Alkali, be taken in half an ounce of distilled Water.

161. WORT.

Take of Malt fresh ground,	1 pound.
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Infuse it in three pints of boiling Water, let it stand for four hours and then pour off the clear liquor for use.

Dose. From two to four pints in a day.

162. HEMLOCK PLAISTER WITH AMMONIACUM.

Take of the Expressed Juice of Hemlock, 4 ounces.

Gum Ammoniacum,	8 ounces.
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Vinegar of Squills, sufficient to dissolve the Gums--

Add the Juice to this solution, strain the mixture, and boil it to the consistence of a plaister.

163. TINCTURE OF BARK WITH LIME WATER.

Take of Lime Water, hot,	1 1-2 pint.
which infuse	

Peruvian Bark in powder,	1 1-2 ounce.
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Let it stand for eight or ten days, then pour off the clear liquor.

Dose. From two to four spoonfuls twice a day.

164. SEDATIVE INJECTION.

Take Rose Water,	6 ounces.
Tincture of Opium,	2 or 3 drams.

Mix.—

165. RESTRICTING INJECTION.

Take

Take Infusion of Rose Leaves, without }
 the Vitriolic Acid, } 5 ounces.
 White Vitrol, } 6 grains.
 Acetated Cerufs, } 8 grains.

Mix.—

166. CALOMEL INJECTION.

Take Infusion of Roses, as above, or }
 Decoction of Bark, } 4 ounces.
 Calomel prepared, } 2 ounces.

Mix.—

167. MERCURIAL OINTMENT.

Take Hog's Lard, }
 Quicksilver, } of each equal parts.
 Rub them together in a marble mortar, till no globule of the
 Quicksilver appears.

168. CORROSIVE SUBLIMATE SOLUTION.

Take of Water, }
 Brandy, or } 5 ounces.
 Any kind of Ardent Spirit, }
 Corrosive Sublimate, } 10 grains.

Dose. Half an ounce.

169. CORROSIVE SUBLIMATE PILLS.

Take Corrosive Sublimate, } 15 grains.
 Dissolve them in }
 Distilled Water, } 6 drams.

To this liquor add

Crumbs of white Bread, } 2 1-2 drams.

and make 120 Pills.

Dose. Two, night and morning, which may be gradually increased to four, if the stomach will bear them.

170. MERCURIAL GUMMOUS SOLUTION.

Take purified Quicksilver, } 1 dram.
 Gum Arabic, } 3 drams.
 Syrup of Rhubarb, a sufficient quantity.

These are to be rubbed together in a glass, or marble mortar, gradually adding a little Syrup at a time, until the whole of the Quicksilver runs into a mucus; then, in the same gradual manner, add

Rose Water, } 12 ounces.

Dose. One ounce night and morning.

171. MERCURIAL GUMMOUS PILL,

Take the Mercurial Mucus above described, and add to it
 Crumbs of Bread, } 1-2 an ounce.

Make these into pills of six grains each.

Dose. Five night and morning.

No. 172. MERCURIAL SYRUP.

Take Mercurial Mucus above described, formed with Syrup of Roses instead of that of Rhubarb, and gradually add to it of the same Syrup four ounces and a half.

Dose. A tea-spoonful morning and evening; but let the spoon be of Wood, Mother of Pearl, or China—and the dose may be gradually increased.

173. MEZEREON DECOCTION.

Take of the Bark of the Mezereon-	}	1 ounce.
root, fresh gathered,		

Distilled Water,	12 pints.
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Boil these together to eight pints, and, towards the close, add

Liquorice Root bruised,	1 ounce.
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Dose. Half a pint twice a day.

174. SULPHUR OINTMENT.

Take Flower of Sulphur,	1 ounce.
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Fixed Ammonia Salt,	1 dram.
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Hog's Lard,	2 ounces.
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Mix.—A fourth of this to be well rubbed only on a fourth part of the body every evening.

175. MERCURIAL LOTION.

Take of Muriated Quicksilver,	1 dram.
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Rock Alum,	2 drams.
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Purified Nitre,	1-2 an ounce.
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Lime Water,	1-2 a pint.
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Mix.—

176. MERCURIAL OINTMENT.

Take Muriated Quicksilver,	10 grains.
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White precipitated Quicksilver,	1 dram.
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Simple Ointment,	1 1-2 ounce.
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Oil of Lavender,	a few drops.
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Mix.—

177. MERCURIAL GIRDLE.

Take of purified Quicksilver,	3 drams.
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Let these be well shook with

Lemon Juice,	2 ounces.
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till all the globules shall cease to appear, then pour off the liquor, and to the killed Quicksilver, (so called) let there be added half the Yolk of an Egg, and one scruple of Gum Tragacanth very finely powdered. This composition must be spread upon a flannel roller, about the breadth of three fingers, and sufficiently

ently long to form a girdle to encircle the waist, which must be there worn.

178. DECOCTION OF THE INTERIOR BARK OF THE ELM TREE.

Take the interior Bark of the Elm Tree, 4 ounces.

Distilled Water, 4 pints.

Let these be boiled to two pints, and then strained.

Dose. Half a pint twice a day.

179. BARK AND SASSAFRAS ELECTUARY.

Take Peruvian Bark, very finely powdered, } 1 1-2 ounce.

Powder of Sassafras Bark, 1-2 an ounce.

Syrup of Sugar, sufficient to form an Electuary.

Dose. Quantity of a large Nutmeg twice a day.

180. STIMULANT LOTION.

Take British Spirits, 8 ounces.

Ley of Tartar, 1 ounce.

Spirit of Sal Ammoniac, 2 drams.

Mix.—

181. VOLATILE FOETID MIXTURE.

Take Asafœtida, 1 dram.

dissolve these in the

Liquor of Hartshorn, 2 drams.

Pennyroyal Water, 2 ounces.

Syrup of Saffron, 2 drams.

Mix.—Dose. One or two tea-spoonfuls occasionally.

182. LINIMENT AGAINST RICKETS.

Take Palm Oil,

Balsam of Peru, } of each 2 drams.

Spirit of Sal Ammoniac, } 1 dram.

Oil of Nutmeg expressed, } of each 20 drops.

—Cloves,

—Amber,

Mix.—

I N D E X.

This not only is an Index of reference, but of explanation; as there are in the Work unavoidably some technical Terms, not very readily intelligible to common Readers. Where, therefore, the Words are not explained in the Body of the Work, they are in this Place. And Words marked with an Asterisk are referred to the Page where such may be found, with the Sense given of them. Where the letter F. is placed before the Figures, they refer to the articles in some of the Forms of Medicine, P. 229. 403. 527.



A.

- A** Bdomen, lower belly.
 Abdominal, belonging to the abdomen.
 Ablutions, cleansing.
 Abscess, (See Inflammation.)
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 Æthiops mineral, 160.
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- Ammoniac, sal, fixed, 176. 183. F. 409. 532; spirits of, F. 406. 533. 534.
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- Ammoniacum, gum, 149. 163. 164. 183. F. 407. 408. 527, 528. 531.
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- Burgundi pitch, F. 395.
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 Callous, hard, or firm.
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 Communion, dividing or thinning.

Commixture, mixing together.

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Concoction, digestion.

Concreffible, uniting together.

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Congerics, a mass or heap.

Conical, like a cone, in form like a sugar loaf.

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Cuticular, appertaining to the skin.

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Cylindrical, like a cylinder, or circular tube.

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Defluxions, flux of humour, upon a part.

Deleterious, destructive.

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Disseminated, to scatter or spread.

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Evanescent, extremely minute.

Evolution, disentangling.

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Impetus, force.

Inanition, want of proper fullness.

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